



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - English
Maximum Marks - 80

General Instructions:

1. This question paper has 16 questions. All questions are compulsory.
 2. This question paper contains THREE sections-Sections A: *READING SKILLS*, Section B: *CREATIVE WRITING SKILLS* and Section C: *LITERATURE*.
 3. Attempt all questions based on specific instructions for each part. Write the correct question number and part thereof in your answer sheet.
 4. Separate instructions are given with each question/part, wherever necessary.
 5. Adhere to the prescribed word limit while answering the questions.
-

1. Read the passage given below and answer the questions that follow: (10 Marks)

1. In the age of rapid digitisation and algorithmic decision-making, the question of what it means to be 'human' becomes increasingly complex. Artificial intelligence systems are no longer confined to the realm of science fiction—they curate our music, recommend our purchases, transcribe our thoughts, and even drive our cars. Yet, while algorithms can emulate logic and detect patterns, they lack what philosophers call *qualia*—the raw, subjective, conscious experience of being.
2. This distinction is essential, for without it, we risk conflating computation with cognition. A machine may process millions of data points per second, but it does not *know* that it knows. It cannot yearn, hesitate, doubt, or wonder. It cannot suffer heartbreak or feel awe under a starlit sky.
3. What adds to this complexity is our growing dependency on algorithmic convenience. When a navigation app directs us to a particular route, or a streaming platform recommends content, our sense of autonomy is subtly eroded. We follow, often unquestioningly. This passive consumption blurs the line between choice and compulsion.
4. Furthermore, the data we feed into these systems—knowingly or unknowingly—shapes their intelligence. This cyclical exchange raises concerns not only about privacy but also about the distortion of human thought itself. If we are persistently shown what aligns with our past behaviour, do we ever evolve beyond it? Or are we merely being shepherded into echo chambers of predictability?
5. To be human is to imagine the improbable, to make irrational leaps, to stumble, reflect, and reorient. The challenge, then, is not just technological but existential: in delegating thought, are we diminishing what it means to think? In automating decisions, are we abdicating responsibility? And perhaps most crucially—in allowing algorithms to increasingly define our preferences—are we outsourcing our very identities?
6. As the digital mirror reflects only what it is fed, we must ask ourselves: do we want to be reflections, or do we wish to remain creators?

Answer the following questions by choosing the correct option or writing brief responses:

(10x1=10 Marks)

- i. Which of the following best states the central idea of the passage?
 - a. Technology makes life more convenient and productive
 - b. AI has surpassed human intelligence
 - c. Over-dependence on AI may compromise human essence
 - d. Machines will eventually replace humans
- ii. What does the author imply by the term *qualia*?
 - a. Logical thinking ability of machines
 - b. Emotional responses of advanced AI
 - c. Data processing capabilities
 - d. Personal and subjective experiences
- iii. Which of the following best captures the tone of the passage?
 - a. Humorous and light-hearted
 - b. Ironical and dismissive
 - c. Reflective and cautionary
 - d. Technical and descriptive
- iv. What concern does the author raise regarding algorithmic recommendations?
 - a. They weaken independent decision-making
 - b. They reduce online advertisements
 - c. They enhance personal freedom
 - d. They simplify navigation systems
- v. According to the passage, echo chambers refer to:
 - a. Encrypted data environments
 - b. Repetitive cycles of familiar choices
 - c. Rooms where AI is tested
 - d. Virtual reality simulations
- vi. Choose the correct synonym of the word "abdicating" as used in the passage (para 5):
 - a. Seizing
 - b. Accepting
 - c. Abandoning
 - d. Embracing
- vii. Fill in the blank:
The passage suggests that AI cannot experience _____, unlike humans.
- viii. Identify one rhetorical question the author uses to highlight the existential dilemma.
- ix. State True or False:
"The author supports complete reliance on AI to simplify human life."
- x. What does the author mean by the line: "Do we want to be reflections, or do we wish to remain creators?" Answer briefly.

2. Read the passage carefully and answer the questions that follow:

(8 Marks)

1. With the rising focus on environmental sustainability, India's renewable energy sector has seen a significant transformation in the past decade. According to the Ministry of New and Renewable Energy (MNRE), India is the 4th largest producer of renewable energy in the world. The government has set an ambitious target of installing 500 GW of renewable energy capacity by 2030, including solar, wind, biomass, and small hydro projects.
2. In recent years, the country has made remarkable strides in solar energy. As of March 2025, solar accounts for 38% of India's total renewable energy, followed by wind energy at 32%. The rest is contributed by bioenergy, small hydropower, and others. Rooftop solar systems have gained popularity in urban areas, while large-scale solar parks are being developed in states like Rajasthan, Gujarat, and Tamil Nadu.
3. A recent NITI Aayog report highlighted that despite this growth, challenges persist. Land acquisition delays, inadequate grid infrastructure, and financing issues often hinder timely project implementation. Moreover, the demand for skilled manpower in the sector remains unmet.
4. On the brighter side, India's renewable energy growth has already contributed to a reduction in carbon emissions by over 200 million tonnes annually. Experts believe that with consistent policy support, technological innovation, and community participation, India can emerge as a global leader in clean energy transition.

India's Renewable Energy Capacity (March 2025)

(All values are in GW - Gigawatts)

Energy Type	Capacity (GW)
Solar Energy	115
Wind Energy	97
Bioenergy	34
Small Hydro	21
Others	8
Total	275

Answer the following questions by choosing the correct option or writing brief responses:
(8x1 =8 Marks)

- i. Which type of renewable energy has the largest installed capacity in India as of March 2025?
 - a. Wind Energy
 - b. Solar Energy
 - c. Small Hydro
 - d. Bioenergy
- ii. What is India's target for renewable energy capacity by the year 2030?
- iii. True or False:
Wind energy currently contributes more to India's renewable energy sector than solar energy.

- iv. **Fill in the blank:**
India is currently the _____ largest producer of renewable energy in the world.
- v. **According to the passage, which of the following is *not* a challenge faced by the renewable sector?**
a. Lack of public interest
b. Grid infrastructure issues
c. Skilled manpower shortage
d. Delays in land acquisition
- vi. **What role does rooftop solar play in India's energy transformation?**
a. Only benefits rural communities
b. Is declining due to cost
c. Is gaining traction in cities
d. Has been replaced by wind energy
- vii. **Find the correct synonym of the word "block" from paragraph 3 of the passage.**
- viii. **What impact has the renewable energy growth had on India's carbon emissions?**

3. Read the following passage carefully and answer the questions that follow it: (8 Marks)

In the contemporary world, where attention has become a scarce commodity, the concept of *deep work*—defined by author Cal Newport as the ability to focus without distraction on a cognitively demanding task—is becoming increasingly relevant. Most people operate in what he calls a state of *shallow work*, characterized by fragmented attention, constant interruptions, and multitasking. While shallow work may create the illusion of productivity, it rarely leads to meaningful outcomes or original thought.

One of the main obstacles to deep work is the omnipresence of digital distractions—emails, notifications, and social media—that condition our brains for short bursts of attention rather than sustained focus. Moreover, open office environments, once hailed as collaborative spaces, often amplify noise and reduce cognitive concentration.

Research in neuroscience indicates that the brain requires about 20–25 minutes to fully enter a state of deep focus. Any interruption resets this cycle, significantly lowering productivity. In contrast, cultivating deep work practices—such as setting aside uninterrupted time blocks, minimizing digital noise, and prioritising cognitively demanding tasks—can dramatically enhance output and creativity.

However, deep work is not merely a productivity hack; it is a skill. Like any skill, it must be deliberately practised and refined. In a world that rewards immediacy and reactivity, the ability to engage in sustained concentration may become not just an advantage—but a necessity.

- I. Make notes on the passage given above using *headings and subheadings*. Use recognizable abbreviations (minimum 4). Supply a suitable title to your notes. (5 Marks)
- II. Write a summary of the above passage in about 50 words. (3 Marks)

SECTION B: Grammar and Creative Writing (23 Marks)

(Total seven questions to be done out of eight given in Q. 4 & 5)

4. Fill in the blanks with the correct form of the verb given in the brackets. (4 × 1 = 4 marks)

The advancement of neuroscience (a) _____ (reveal) surprising insights into how memory functions. Scientists (b) _____ (study) the brain's plasticity for decades, but only recently have they (c) _____ (begin) to understand how emotions deeply (d) _____ (influence) long-term retention and recall processes.

5. Rearrange the following words/phrases to form meaningful sentences. (4×1=4 marks)

(a) has / our / ability / the / increasing / for / long / exposure / affected / to / screen / concentrate

(b) the / insufficient / evidence / to / a / owing / verdict / struggled / to / jury / reach

(c) more / in / era / have / become / adaptability / and resilience / than / before / of / the / disruption / crucial / ever

(d) without / from / AI / the / systems / biases / are / not / human / oversight / entirely / free

6. Attempt any one of the two, (A) or (B) in about 50 words: (3 Marks)

(A) The Literary Society, Agra is organizing a national-level inter-school literary fest titled "*LitScape 2025 - Where Words Create Worlds.*" Draft a visually appealing poster to promote the fest, highlighting the events (e.g. debate, poetry, storytelling etc).

OR

(B) Your city has witnessed a rise in cybercrime targeting school students. As the head of your school's Cyber Safety Cell, design a poster for a school-wide campaign titled: "Stay Safe Online". Your poster should include creative elements, a powerful message, and practical safety tips.

7. Attempt any one of the two, (A) or (B) in about 50 words: (3 Marks)

(A) You are the HR Manager of *Nova Mind Edutech Pvt. Ltd.*, a fast-growing online education company based in Bengaluru. You have to recruit a qualified **Teacher** for English Language Curriculum (Grades 6-10). The candidate must have at least 5 years of experience, and familiarity with digital tools. Draft a suitable classified advertisement for the newspaper.

OR

(B) You own a fully furnished 3BHK apartment in South Delhi's upscale Defence Colony. You wish to rent it out only to a foreign diplomat or a corporate executive. Draft a classified advertisement for a national newspaper highlighting features such as secure neighbourhood, proximity to airport, and availability of domestic staff.

8. Attempt any one of the two, (A) or (B) in 120 - 150 words:

(5 Marks)

- (A) You are Rohan/ Reena Sharan of Class XII. As the School Captain, you have been invited to deliver a speech at a student leadership conference on the topic: "Leading with Integrity in Today's World."

Draft a speech addressing how young leaders can uphold values amidst challenges posed by corruption and materialism.

OR

- (B) You are Samar/ Shristy Dubey of Class XII. You have to deliver a speech at your school's morning assembly on the topic: "The Illusion of Freedom in the Age of Surveillance."

Prepare a speech that reflects on privacy, digital footprints, and the true meaning of personal freedom. You can use the following cues:

- Meaning of freedom in a traditional sense and in the digital world.
- constant monitoring by governments, tech companies, social media platforms etc
- Every action online leaves data behind.

9. Attempt any one of the two, (A) or (B) in 120 - 150 words:

(5 Marks)

- (A) In a democracy, freedom of expression is highly valued, yet it often clashes with censorship. This raises a key question—Does censorship protect society or restrict creativity?

You are Amita/ Amit Singh of Class XII. You are taking part in an inter-school debate, the topic for which is: "Censorship is a threat to creativity in a democratic society." Draft your debate either *for* or *against* the motion, supporting your arguments with strong logic and real-world examples.

OR

- (B) Artificial Intelligence is increasingly getting integrated in education through personalized learning platforms, virtual tutors or automated assessments.

You are Rahul/ Riya Gupta of Class XII. You are participating in an inter-school debate competition. The motion is: "Artificial Intelligence will soon make traditional schooling irrelevant."

Write a debate either for or against the motion.

SECTION C: Literature (31 Marks)

10. Read the extracts given below and answer the questions, from any one of the two, (A) or (B):
(3×1=3 Marks)

- (A) "The sea holiday
was her past, mine is her laughter.
Both wry
with the laboured ease of loss."

(i) What does the expression "*laboured ease of loss*" suggest in the context of the poem?

- a. Loss that is long forgotten and easily dismissed
- b. The contradiction of struggling to come to terms with a permanent absence
- c. A peaceful acceptance of physical pain
- d. The ease with which memories fade

(ii) In the second line, the word 'her' has been used twice. Whom does the word refer to?

(iii) Which literary device is primarily used in the line "*Both wry with the laboured ease of loss*"?

OR

- (B) "Then sleek as a lizard, and alert and abrupt,
She enters the thickness,
And a machine starts up
Of chitterings, and a tremor of wings, and trillings —
The whole tree trembles and thrills.
It is the engine of her family."

- (i) What does the expression "*sleek as a lizard*" signify about the goldfinch?
a. It highlights her elegance and gentle landing
b. It emphasizes her stealth, speed, and sudden movements
c. It suggests she is a predator in disguise
d. It shows she is confused and disoriented
- (ii) What does the expression "*a machine starts up*" symbolise in the context of the poem?
- (iii) The poetic device used in the line "*The whole tree trembles and thrills*" is _____.

11. Read the extracts carefully and answer the questions from any one of the two, (A) or (B):
(3×1=3 Marks)

(A) "*The night of the scan, workmen carried Tut from the tomb in his box. Like pallbearers, they climbed a ramp and a flight of stairs into the swirling sand outside, then rose on a hydraulic lift into the trailer that held the scanner. Twenty minutes later, two men emerged, sprinting for an office nearby. The million-dollar scanner had stopped working, desert sand had got into a cooler fan.*"

- (i) Why are the workmen compared to *pallbearers* in the extract?
a. They were carrying a coffin for burial.
b. It reflects the solemnity of transporting Tut's remains again after centuries.
c. They were performing a religious ritual.
d. They were dressed in black and mourning.
- (ii) What caused the *million-dollar scanner* to stop working during the process?
- (iii) **Assertion (A):** Workmen carried Tutankhamun's coffin out of the tomb like pallbearers.
Reason (R): The scanner was housed in a trailer near Tutankhamun's tomb.
a. Both A and R are true, and R is the correct explanation of A.
b. Both A and R are true, but R is not the correct explanation of A.
c. A is true, but R is false.
d. A is false, but R is true.

OR

(B) "*We had survived for 15 hours since the wave hit, but Wavewalker wouldn't hold together long enough for us to reach Australia. I checked our charts and calculated that there were two small islands a few hundred kilometres to the east. One of them, Ile Amsterdam, was a French scientific base. Our only hope was to reach these pinpricks in the vast ocean. But unless the wind and seas abated so we could hoist sail, our chances would be slim indeed. The great wave had put our auxilliary engine out of action.*"

- i. Choose the most suitable meaning for the phrase "pinpricks in the vast ocean".
 - a. This phrase expresses the insignificance of the two small islands in the vast ocean.
 - b. This phrase expresses the significance of two small islands in the vast ocean.
 - c. This phrase expresses the insignificance of pins in the vast ocean.
 - d. This phrase expresses the insignificance of prickly islands in the vast ocean.

ii. Why wouldn't Wavewalker hold together long enough ?

iii. **Assertion:** It was difficult to reach Ile Amsterdam in the vast ocean.

Reason: Sailors could not put up sail because of the strong wind and waves.

Choose the correct option:

- a. Both A and R are true, and R is the correct explanation of A.
- b. Both A and R are true, but R is not the correct explanation of A.
- c. A is true, but R is false.
- d. A is false, but R is true.

12. Read the extracts carefully and answer the questions from any one of the two, (A) or (B):
(4×1=4 Marks)

(A) *"It wasn't morning yet, but it was summer and with daybreak not many minutes around the corner of the world it was light enough for me to know I wasn't dreaming. My cousin Mourad was sitting on a beautiful white horse. I stuck my head out of the window and rubbed my eyes."*

(i) What does the narrator mean by "I wasn't dreaming" in this context?

(ii) State True or False:

The phrase "not many minutes around the corner of the world" suggests that the narrator was calculating time precisely.

(iii) Which of the following themes is reflected in this extract?

- a. Loss and grief
- b. Adventure and moral conflict
- c. Friendship and betrayal
- d. War and survival

(iv) What tone is conveyed through the narrator's description of the scene?

- a. Fearful and tense
- b. Melancholic and nostalgic
- c. Confused but filled with wonder
- d. Angry and bitter

OR

(B) *"She was wearing my mother's green knitted cardigan. The wooden buttons were rather pale from washing. She saw that I was looking at the cardigan and half hid herself. I knew now that I was at the right address."*

(i) State True or False:

The narrator's recognition of the cardigan signifies that the narrator has found her mother's belongings and confirmed the address.

- (ii) What is the woman's reaction upon noticing the narrator's gaze at the cardigan?
- (iii) Why does the narrator mention the "*wooden buttons*" being "*pale from washing*"?
 - a. To show the cardigan is no longer valuable
 - b. To highlight that the cardigan has been used often and is worn out
 - c. To express pride in her mother's clothing
 - d. To show that the buttons were broken
- (iv) What tone does the narrator adopt in this extract?
 - a. Sarcastic and bitter
 - b. Curious and hopeful
 - c. Accusatory and forceful
 - d. Quietly observant and emotionally restrained

13. Answer ANY TWO (one from prose and one from poetry) from the questions that follow in 40-50 words each. (2×3=6 Marks)

- (i) "But her lips moved in prayer, her fingers were busy telling the beads of her rosary." How does this image of Khushwant Singh's grandmother reflect both spiritual resilience and emotional detachment at once, at the time when he was going abroad?
- (ii) The narrator describes the events after the wave struck: "I checked our charts and calculated that there were two small islands a few hundred kilometres to the east." How do planning, and endurance combine here to highlight the human will to survive?
- (iii) The poet says, "*Now she has been dead nearly as many years as that girl lived.*" How does the juxtaposition of youth and death reflect the poet's grief with the passage of time?
- (iv) The poem "The Laburnum Top" transforms from barrenness to vitality. How does Ted Hughes use sound imagery to symbolise the role of the goldfinch in awakening the tree?

14. Answer ANY ONE of the two questions that follow in 40-50 words. (1×3=3 Marks)

- (i) In the story 'The Summer of the Beautiful White Horse', it is said about the Garoghlanian tribe, "A man could be the father of his son's flesh, but not of his spirit." Explain the meaning of this line.

OR

- (ii) "...I was curious about all the possessions that must still be at that address. I wanted to see them, touch, remember." How does the setting of Mrs. Dorling's house lead to the narrator's disillusionment with her own expectations?

15. Answer ANY ONE of the two questions that follow in 120-150 words. (1×6=6 Marks)

- (i) Though brief and seemingly simple, 'The Laburnum Top' is rich with metaphor and meaning. Analyse how the goldfinch and the laburnum tree together represent a symbiotic relationship. How does Hughes use minimalistic language to reflect complex truths about motherhood, vitality, and the transient nature of life?

OR

- (ii) Discovering Tut: The Saga Continues is both a narrative of scientific scrutiny and a reflection of superstitious beliefs. Discuss how the text presents this amalgamation with reference to examples.

16. Answer ANY ONE of the two questions that follow in 120-150 words.

(1×6=6 Marks)

- (i) Aram narrates the story from a reflective lens, revealing both admiration and unease towards Mourad's actions. Analyse how the story explores the idea of morality in the context of cultural pride, personal desire, and innocence?

OR

- (ii) In *The Address*, the narrator's experience is not just a search for belongings but a deeper exploration of identity, memory, and detachment. Critically examine how the wartime trauma reshaped relationships, and how the story conveys the impossibility of reclaiming the emotional past through physical objects.
-



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Mathematics (Applied)
Maximum Marks - 80

General Instructions:

1. This Question paper contains - five sections A, B, C, D and E. Each section is compulsory. However, there are internal choices in some questions.
2. Section A has 18 MCQ's and 02 Assertion-Reason based questions of 1 mark each.
3. Section B has 5 Very Short Answer (VSA)-type questions of 2 marks each.
4. Section C has 6 Short Answer (SA)-type questions of 3 marks each.
5. Section D has 4 Long Answer (LA)-type questions of 5 marks each.
6. Section E has 3 source based/case based/passage based/integrated units of assessment (4 marks each) with sub parts.

SECTION - A

1. The decimal number equivalent to the binary number 10101 is
(a) 21 (b) 12 (c) 22 (d) 31
2. The value of $\log_5 \left(1 + \frac{1}{5}\right) + \log_5 \left(1 + \frac{1}{6}\right) + \log_5 \left(1 + \frac{1}{7}\right) + \dots + \log_5 \left(1 + \frac{1}{624}\right)$ is
(a) 5 (b) 4 (c) 3 (d) 2
3. If a, b, c are positive real numbers, then $\sqrt[5]{3125a^{10}b^5c^{10}}$ is equal to
(a) $125a^2bc^2$ (b) $25ab^2c$ (c) $5a^3bc^3$ (d) $5a^2bc^2$
4. The angle between two hands of a clock at 8:30 am is
(a) 75° (b) 80° (c) 85° (d) 45°
5. In a day the number of times a straight angle formed between minute hand and hour hand is
(a) 11 (b) 22 (c) 33 (d) 44
6. In a certain language if 'DPT' is coded as 'GSW' then 'CAT' is coded as
(a) FDW (b) DFW (c) WFD (d) None of these
7. The number of proper subsets of a set containing n elements is
(a) 2^n (b) 2^{n+1} (c) $2^n - 1$ (d) None of these
8. If $A = \{1, 2, 3, 4, 5\}$, $B = \{2, 4, 6\}$ and $C = \{3, 4, 6\}$ then $(A \cup B) \cap C$ is
(a) $\{3, 4, 6\}$ (b) $\{1, 2, 3\}$ (c) $\{1, 4, 3\}$ (d) None of these
9. If $R = \{(x, y) : x, y \text{ are whole numbers, and } x^2 + y^2 = 169\}$ then the domain of R is
(a) $\{-13, -12, -5, 0, 5, 12, 13\}$ (b) $\{0, 5, 12, 13\}$
(c) $\{0, 1, 2, 3, \dots, 13\}$ (d) $\{0, \pm 1, \pm 2, \dots, \pm 13\}$

10. If 'MAHENDRA' be coded as 'OCJGPFTC' then 'DINESH' will be coded as
 (a) BGLCQF (b) GLQHVK (c) FKPGUJ (d) EJDFTI
11. The sum of all two digit numbers which when divided by 4 leave 1 as remainder is
 (a) 1210 (b) 1120 (c) 1021 (d) 1102
12. If $x, 2y, 3z$ are in A.P where the distinct numbers x, y, z are in G.P. then common ratio of G.P. is
 (a) 3 (b) $\frac{1}{3}$ (c) 2 (d) $\frac{1}{2}$
13. The product of 5 terms of G.P. whose 3rd term is 2 is
 (a) 2^5 (b) 5^2 (c) 3^2 (d) None of these
14. The count of 4 digit numbers that can be formed with the digits 2,3,4,7 and using each digit once is
 (a) 120 (b) 96 (c) 24 (d) 100
15. Everybody in a room shakes hands with everybody else. The total number of hand shakers is 66. The number of persons in the room is
 (a) 11 (b) 12 (c) 13 (d) 14
16. The number of ways in which the Letters of word SOFTWARE can be arranged in such that the vowels always come together is
 (a) 1440 (b) 360 (c) 120 (d) 4320
17. If $f(x) = px + q$, Where p and q are integers $f(-1) = 1$ and $f(2) = 13$ then p and q are
 (a) $p = 4, q = 5$ (b) $p = -4, q = 5$
 (c) $p = -4, q = -5$ (d) $p = 4, q = -5$
18. The domain and range of the real function $f(x) = \sqrt{x-1}$ are respectively
 (a) $(1, \infty)$ and $(0, \infty)$ (b) $[1, \infty)$ and $(0, \infty)$
 (c) $[1, \infty)$ and $[0, \infty)$ (d) None of these

ASSERTION - REASONING TYPE QUESTIONS

Statement I is called Assertion (A) and Statement II is called Reason (R). Read the given statements carefully and choose the correct answer from the options given below:

- a) Both the Statements are true and Statement II is the correct explanation of Statement I.
 b) Both the Statements are true and Statement II is not the correct explanation of Statement I.
 c) Statement I is true, Statement II is false.
 d) Statement I is false, Statement II is true.
19. **Assertion (A):** If $\log 42.95 = 1.6350$, then $\log 0.04295 = \bar{2}.6350$
Reason (R): If $n = m \times 10^p$, then $\log n = p + \log m$ Where n is a positive decimal number and $p \in \mathbb{Z}, 1 \leq m < 10$
20. **Assertion (A):** Domain of the function $f(x) = \frac{x+2}{x^2-4x+3}$ is $\mathbb{R} - \{1, 3\}$
Reason (R): Range of the function $f(x) = |x-1|$ is $[0, \infty)$

SECTION - B

21. If $A = \{a, b, c\}$ and some elements of $A \times B$ are $(a, p), (b, q), (c, q)$. Write the set B and final remaining ordered pairs of $A \times B$ such that $n(A \times B) = 6$

22. If $x = 3$ find the value of $(x^{1/3} + x^{-1/3})(x^{2/3} + x^{-2/3} - 1)$

OR

Evaluate $\log_9 27 - \log_{27} 9$

23. Convert the following

(i) 250 into binary number

(ii) 1111010 into decimal number

24. A polygon has 44 diagonals find the number of its sides.

OR

Find the number of ways of selecting a programme of 5 courses if 9 courses are available in which 2 courses are compulsory for every student.

25. At what time between 4:00 and 5:00 will the hands of the clock be at right angles?

SECTION - C

26. If $f(x) = \frac{x^2 - 3x + 1}{x - 1}$ find $f(-2) + f\left(\frac{1}{3}\right)$

OR

If $f(x) = \log\left(\frac{1+x}{1-x}\right)$, then show that $f(x) + f(y) = f\left(\frac{x+y}{1+xy}\right)$

27. If $x^2 + y^2 = 23xy$, prove that $\log\left(\frac{x+y}{5}\right) = \frac{1}{2}(\log x + \log y)$

28. Find the number of permutations of the letters of word CIVILIZATION when two vowels never come together.

OR

A box contains 5 different red balls and 6 different white balls. Find the number of ways of selecting 6 balls so that at least two balls of each colour must be selected.

29. Let $A = \{x: x \text{ is a positive prime less than } 10\}$

$B = \{x: x \in N \text{ and } 2 < x \leq 8\}$

then find (i) $A \cup B$

(ii) $A \cap B$

(iii) $B - A$

30. If a, b, c, d are in GP show that $a^2 + b^2, b^2 + c^2, c^2 + d^2$ are in G.P

31. Prove that $1 \cdot 2 \cdot 3 \cdot 4 \cdots (2n-1) \cdot 2^n = (2n)!$

SECTION - D

32. Prove that

$$(YZ)^{\log \frac{Y}{Z}} \cdot (ZX)^{\log \frac{Z}{X}} \cdot (XY)^{\log \frac{X}{Y}} = 1$$

OR

If $x^a \cdot x^b \cdot x^c = 1$ ($x \neq 0$), show that

$$x^{\frac{a^2}{bc}} \cdot x^{\frac{b^2}{ca}} \cdot x^{\frac{c^2}{ab}} = x^3$$

33. Find three numbers in GP whose product is 216 and the sum of their product in pairs is 156.

OR

If the first term of an A.P is 2 and the sum of the first five terms is equal to one - fourth of the sum of the next five terms, find the sum of the first 30 terms. Also find 20th term.

34. Find the domain and range of the functions given by

(i) $f(x) = \frac{1}{1-x^2}$ (ii) $g(x) = \sqrt{9-x^2}$

35. If pth term of an A.P is $\frac{1}{q}$ and qth term is $\frac{1}{p}$, then find the sum of its first pq terms where $p \neq q$.

SECTION - E

Case Based: -

36. The letters of word 'COMPUTER' are arranged in all possible ways.

Based on the above information answer the following question.

- (a) Find the total number of words with or without meaning that can be formed. [1]
(b) Find the number of words starting with C and end with R. [1]
(c) Find the number of words in which vowels occupy odd places [2]

OR

- (c) Find the number of words in which vowels occur together. [2]

37. Coding is a method of converting information in the form of letters, words or phrases into same or other form for the purpose of security.

Decoding is a method of converting the message by the source into original form some basis method of coding - decoding are

- (i) Letter coding (ii) Number coding (iii) group coding (iv) Letter for digits.

Based on the above information

Answer the following question .

- (a) In a certain language 'LUCKNOW' is codes as 'NWEMPQY' how is 'DELHI' coded ? [1]
(b) If 'RAHUL' is coded as 22-05-12-25-16 then how you will code 'VIRAT'? [1]
(c) In a certain language if ' SHARPNER' is coded as 'LPBJFBJJ' how 'ERASER is coded? [2]

OR

- (d) In a certain language if 'INDIA' as coded as 'KMFHC', how 'AMERICA is coded'? [2]

38. In a survey of 40 students, it was found that 21 had taken mathematics, 16 had taken physics and 15 had taken chemistry, 7 had taken Mathematics and chemistry, 12 had taken Mathematics and physics, 5 had taken physics and chemistry and 4 had taken all the three subjects.

Based on above information, answer the following questions:

- (a) Find the number of students who had taken Mathematics only [1]
(b) Find the numbers of students who had taken Physics and Chemistry but not Mathematics. [1]
(c) Find the number of students who had taken exactly one of three subjects [2]

OR

- (c) Find number of students who had taken none of the subjects. [2]



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 hours

Subject - Mathematics (Core)
Maximum Marks- 80

General Instructions:

1. This Question paper contains - **five sections A, B, C, D and E**. Each section is compulsory. However, there are internal choices in some questions.
2. **Section A** has **18 MCQ's** and **02 Assertion-Reason based questions of 1 mark each**.
3. **Section B** has 5 Very Short Answer (VSA)-type questions of 2 marks each.
4. **Section C** has 6 Short Answer (SA)-type questions of 3 marks each.
5. **Section D** has 4 Long Answer (LA)-type questions of 5 marks each.
6. **Section E** has 3 source based/case based/passage based/integrated units of assessment (4 marks each) with sub parts.

SECTION - A

1. For only two sets A and B, $A \cap (A \cup B)'$ is equal to
(a) A (b) B (c) ϕ (d) $A \cap B$
2. In a class of 60 students, 25 students play cricket, 20 students play tennis, and 10 students play both the games. Then, the number of students who play neither is
(a) 0 (b) 25 (c) 35 (d) 45
3. If A and B are two sets, then $A \cap (A \cup B)$ equals
(a) A (b) B (c) ϕ (d) $A \cap B$
4. For any two sets A and B, $(A - B) \cup (B - A) =$
(a) $(A - B) \cup A$ (b) $(B - A) \cup B$ (c) $(A \cup B) - (A \cap B)$ (d) $(A \cup B) \cap (A \cap B)$
5. If a relation R is defined on the set Z of integers by the rule $(a,b) \in R \Leftrightarrow a^2 + b^2 = 25$. Then, Domain (R) =
(a) {3,4,5} (b) {0,3,4,5} (c) {0, ± 3 , ± 4 , ± 5 } (d) None of these
6. Let $A = \{1,2,3,4\}$ and $B = \{a, b, c\}$. Then, the total number of functions from A to B is
(a) 81 (b) 64 (c) 12 (d) 2^{12}
7. A Pendulum swings through an angle of 42° in describing an arc of length 55 c.m. The length of pendulum is
(a) 56 cm (b) 60 cm (c) 75 cm (d) 88 cm
8. If $\cot x + \sec x = 2$, then $\cos^{2025} x + \sec^{2025} x$ is equal to
(a) 1 (b) 2 (c) 2^{2025} (d) None of these

9. The value of $\frac{\tan 80^\circ - \tan 10^\circ}{\tan 70^\circ}$ is

- (a) 0 (b) 1 (c) 2 (d) 3

10. $\frac{1 + \sin 2x - \cos 2x}{1 + \sin 2x + \cos 2x}$ is equal to

- (a) $\tan 2x$ (b) $\tan x$ (c) $\cot 2x$ (d) $\cot x$

11. If m, n, p, q are consecutive integers then the value of $i^m + i^n + i^p + i^q$ is

- (a) 1 (b) -1 (c) 0 (d) none of these

12. The number of solutions of the equation $z^2 + |z|^2 = 0$ is

- (a) 1 (b) 2 (c) 3 (d) infinitely many

13. The value of $\sqrt{-9} \times \sqrt{-25}$ is

- (a) 15 (b) -15 (c) 15i (d) -15i

14. If $\frac{4}{2-|x|} > 0$, then

- (a) $x \in (-2, 2)$ (b) $x \in (-\infty, -2) \cup (2, \infty)$ (c) $x > 2$ (d) $x < 2$

15. The solution set of the inequation $\frac{x+1}{x+2} > 1$ is

- (a) $(-2, \infty)$ (b) $(-\infty, -2]$ (c) $(-\infty, -2)$ (d) $[-2, \infty]$

16. The number of permutation of n different objects, taken r at a time, when repetitions are allowed, is

- (a) n_{p_r} (b) $n!$ (c) n^r (d) r^n

17. The value $15_{c_8} + 15_{c_9} - 15_{c_6} - 15_{c_7}$ is

- (a) 16_{c_7} (b) 16_{c_8} (c) $2 \times 16_{c_9}$ (d) 0

18. The number of triangles that are formed by choosing the vertices from a set of 12 points, seven of which lie on the same line, is

- (a) 105 (b) 185 (c) 175 (d) 188

ASSERTION - REASONING TYPE QUESTIONS

Statement I is called Assertion (A) and Statement II is called Reason (R). Read the given statements carefully and choose the correct answer from the options given below:

- a) Both the Statements are true and Statement II is the correct explanation of Statement I.
- b) Both the Statements are true and Statement II is not the correct explanation of Statement I.
- c) Statement I is true, Statement II is false.
- d) Statement I is false, Statement II is true.

19. Statement I (A) : If $\frac{x+3}{|x+3|} \geq 0$, then $x \in (-3, \infty]$

Statement II (R) : $|x| = \begin{cases} x, & x \geq 0 \\ -x, & x < 0 \end{cases}$

20. **Statement I (A):** The number of ways in which n distinct balls can be put into two boxes is 2^n

Statement II (R): The total number of ways of arranging n distinct objects taken 2 at a time is n_{p_2} .

SECTION - B

21. For any two sets A and B, if $A \cup B = A \cap B$ then prove that $A = B$

OR

For any two sets A and B, if $A \cap B' = \Phi$ then prove that $A = A \cap B$

22. Let A, B and C three sets such that $A \cup B = C$ and $A \cap B = \Phi$, prove that $A = C - B$.

23. If $\sin x + \sin y = \sqrt{3} (\cos y - \cos x)$, then find the value of $\sin 3x + \sin 3y$

24. A real value of x that satisfies the equation $\frac{3-4ix}{3+4ix} = \alpha - i\beta$, where $\alpha, \beta \in R$. Find the value of $\alpha^2 + \beta^2$.

25. If $56_{p_{r+6}} : 54_{p_{r+3}} = 30800 : 1$, find r

OR

Determine n if $2n_{C_3} : n_{C_3} = 12 : 1$.

SECTION C

26. Let A and B be sets. If $A \cap X = B \cap X = \Phi$ and $A \cup X = B \cup X$ for some set X . Prove that $A = B$.

27. Find the domain and range of the real function, $f(x) = \sqrt{9 - x^2}$.

OR

If $y = f(x) = \frac{ax-b}{bx-a}$ and $a^2 \neq b^2$ then prove that $x = f(y)$.

28. Find the value of $\sin 18^\circ$.

OR

Show that $\sqrt{3} \operatorname{cosec} 20^\circ - \sec 20^\circ = 4$.

29. If α and β are different complex numbers such that $|\beta| = 1$, show that $\left| \frac{\beta - \alpha}{1 - \bar{\alpha}\beta} \right| = 1$

OR

If $|z_1| = |z_2| = |z_3| = \dots = |z_n| = 1$ then prove that

$$\left| \frac{1}{z_1} + \frac{1}{z_2} + \frac{1}{z_3} + \dots + \frac{1}{z_n} \right| = |z_1 + z_2 + z_3 + \dots + z_n|.$$

30. Solve $\frac{5}{x-2} > 3$ and represent the solution set on the number line.

31. (i) How many different words can be formed by using all the letters of the word "ALLAHABAD"? [1]

In how many of them

(ii) both L's do not come together? [1]

(iii) The vowels occupy the even positions? [1]

SECTION - D

32. If $a f(x) + b f\left(\frac{1}{x}\right) = \frac{1}{x}$, where $a \neq b$ and $x \neq 0$, find $f(x)$.

33. (a) Prove that $\frac{\sin 5x - 2 \sin 3x + \sin x}{\cos 5x - \cos x} = \operatorname{cosec} 2x - \cot 2x$ [3]

(b) If α and β be two distinct real numbers such that $\alpha - \beta \neq 2n\pi$ for any integer n , satisfying the equation $a \cos \theta + b \sin \theta = c$, then prove that $\cos(\alpha + \beta) = \frac{a^2 - b^2}{a^2 + b^2}$ [2]

OR

(a) Prove that $\frac{\sin 8x \cos x - \sin 6x \cos 3x}{\cos 2x \cos x - \sin 4x \sin 3x} = \tan 2x$ [3]

(b) Prove that $\frac{\tan 5\theta + \tan 3\theta}{\tan 5\theta - \tan 3\theta} = 4 \cos 2\theta \cos 4\theta$ [2]

34. Find the real values of x and y for which $\left(\frac{x-1}{3+i} + \frac{y-1}{3-i}\right) = i$

OR

Find all nonzero complex numbers Z satisfying $\bar{Z} = i Z^2$

35. A person has to select 4 cards from a pack 52 playing cards.

In how many of these

- (a) 4 Cards are of the same suit? [1]
- (b) 4 Cards belongs to four different suits? [1]
- (c) 4 Cards are face cards? [1]
- (d) 2 are red cards and 2 are black cards? [2]

SECTION - E

36. Given (i) $\cos x \cdot \cos\left(\frac{\pi}{3} - x\right) \cos\left(\frac{\pi}{3} + x\right) = \frac{1}{4} \cos 3x$

(ii) $\sin x \cdot \sin\left(\frac{\pi}{3} - x\right) \sin\left(\frac{\pi}{3} + x\right) = \frac{1}{4} \sin 3x$

Based on the above information, answer the following questions: -

- (a) Find the value of $\cos 20^\circ \cdot \cos 40^\circ \cos 80^\circ$. [1]
- (b) Find the value of $\sin 20^\circ \cdot \sin 40^\circ \sin 80^\circ$. [1]
- (c) Find the greatest and least values of $\cos x \cdot \cos\left(\frac{\pi}{3} - x\right) \cos\left(\frac{\pi}{3} + x\right)$ for all x . [2]

OR

Find the greatest and least values of $\sin x \cdot \sin\left(\frac{\pi}{3} - x\right) \sin\left(\frac{\pi}{3} + x\right)$ for all x . [2]

37. Seema wants a mobile number having 10 digits. It is not just a group of numbers strung out at random. All mobile numbers have 3 things in common, a 2-digit Access code (AC), a 3-digit provider code (PC), and a 5 digit subscriber code (SC). AC code and PC code are fixed, then



- (i) How many mobile numbers are possible if number start with 98073 and no other digit can repeat? [1]
- (ii) How many AC code are possible if both digit in AC code are different and must be greater than 6? [1]
- (iii) How many mobile numbers are possible if AC and PC code are fixed and digits can repeat? [2]

OR

How many mobile numbers are possible with AC code 98 and PC code 123 and digit used in AC and PC code will not be used in SC code? [2]

38. A manufacturer has 1125 liters of 45% acid solution. He wants to dilute it by adding water. Based on the above information, answer the following questions: -

- (a) How much water should be added so that resulting mixture will contain more than 25% but less than 30% acid content? [2]
- (b) How many liters of 35% acid solution be added so that resulting mixture will contain at least 42.5% acid content. [2]



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Physics
Maximum Marks-70

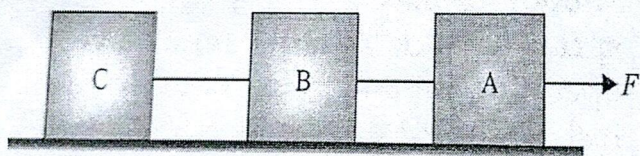
General Instructions:

- (1) There are 33 questions in all. All questions are compulsory.
- (2) This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
- (3) All the sections are compulsory.
- (4) Section A contains sixteen questions, twelve MCQ and four Assertion - Reasoning based of 1 mark each, Section B contains five questions of two marks each, Section C contains seven questions of three marks each, Section D contains two Case study-based questions of four marks each and Section E contains three long answer questions of five marks each.
- (5) There is no overall choice. However, an internal choice has been provided in any two questions in Section B, one question in Section C, and all three questions in Section E. You have to attempt only one of the choices in such questions.
- (6) Use of calculators is not allowed.

[SECTION - A]

1. A force ($F = 15 + 0.50x$) acts on a particle in the x-direction, where F is in newton and x in metre. The work done by this force during a displacement from $x = 0$ to $x = 2.0$ m is
(a) 31 J (b) 0 J (c) 21 J (d) 50 J
2. With what velocity should a ball be projected vertically upward so that the distance covered by it in the 5th second is twice the distance it covers in the 6th second ($g = 10 \text{ m/s}^2$):
(a) 58.8 m/s (b) 49 m/s (c) 65 m/s (d) 19.6 m/s
3. Calculate the maximum acceleration of a moving car so that a body lying on the floor of the car remains stationary. The coefficient of static friction between the body and the floor is 0.15 ($g = 10 \text{ m/s}^2$).
(a) 1.2 m/s^2 (b) 150 m/s^2 (c) 1.5 m/s^2 (d) 50 m/s^2
4. If the velocity of a particle is $v = At + Bt^2$, where A and B are constants, then the distance travelled by it between 1s and 2s is
(a) $\frac{A}{2} + \frac{B}{3}$ (b) $\frac{3A}{2} + B$
(c) $3A + 7B$ (d) $\frac{3A}{2} + \frac{7B}{3}$
5. An object, moving with a speed of 6.25 m/s, is decelerated at a rate given by $dv/dt = -2.5v^{1/2}$, where v is the instantaneous speed. The time taken by the object, to come to rest, would be
(a) 1s. (b) 2s. (c) 8s. (d) 4s.
6. If the first one-third of a journey is travelled at 20 km/h, next one-third at 40 km/h and the last one-third at 60 km/h, the average speed of whole journey will be:
(a) 32.7 km/h. (b) 35 km/h
(c) 40 km/h. (d) 45 km/h

7. Three identical blocks of masses $m = 2 \text{ kg}$ are drawn by a force $F = 10.2 \text{ N}$ on a frictionless surface. The tension between the blocks B and C is



- (a) 9.2 N (b) 3.4 N (c) 4 N (d) 9.8 N
8. The SI unit of a physical quantity is pascal-second. The dimensional formula of this quantity will be
 (a) $[ML^{-1}T^{-1}]$ (b) $[ML^{-1}T^{-2}]$ (c) $[ML^2T^{-1}]$ (d) $[M^{-1}L^3T^0]$
9. If $\vec{A} = 2\hat{i} + 3\hat{j}$ and $\vec{B} = \hat{i} + \hat{j}$, the magnitude of component of $\vec{A}$ along $\vec{B}$ is
 (a) $5/\sqrt{2}$ (b) $3/\sqrt{2}$ (c) $1/\sqrt{2}$ (d) $\sqrt{2}$
10. Two projectiles are projected with the same velocity. If one is projected at an angle of 30° and the other at 60° to the horizontal, then the ratio of maximum heights reached by the first body to that of the second is -
 (a) 3 : 1 (b) 1 : 3 (c) 1 : 2 (d) 2 : 1
11. A wheel of radius 0.20 m is accelerated from rest with an angular acceleration of 1 rad/s^2 . After a rotation of 90° the radial acceleration of a particle on its rim will be-
 (a) $\pi \text{ m/s}^2$ (b) 0.5 m/s^2 (c) $2\pi \text{ m/s}^2$ (d) $0.2\pi \text{ m/s}^2$
12. A physical quantity x depends on quantities y and z as follows: $x = Ay + B \tan(Cz)$ where A , B and C are constants. Which of the following do not have the same dimensions?
 (a) x and B (b) C and z^{-1} (c) y and B/A (d) x and A

For Questions 13 to 16, two statements are given –one labelled Assertion (A) and other labelled Reason (R). Select the correct answer to these questions from the options as given below.

- (A) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
 (B) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
 (C) If Assertion is true but Reason is false.
 (D) If both Assertion and Reason are false.

13. **Assertion:** Dimensional constants are the quantities whose values are constant.
Reason: Dimensional constants are dimensionless.
14. **Assertion:** The projectile has only the vertical component of velocity at the highest point of its trajectory.
Reason: At the highest point the horizontal component of velocity is zero.
15. **Assertion:** The apparent weight of a body in an elevator moving with some downward acceleration is less than the actual weight of body.
Reason: A part of the weight is spent in producing downward acceleration, when the body is in the elevator.
16. **Assertion:** Work done depends upon the angle between force and displacement
Reason: When the force retards the motion of a body, the work done is zero.

[SECTION - B]

17. Write four limitations of dimensional analysis method.
18. A ball is thrown horizontally from the top of the building with a speed of 40 m/s. Find the velocity and position of the ball at the end of 4 seconds.

OR

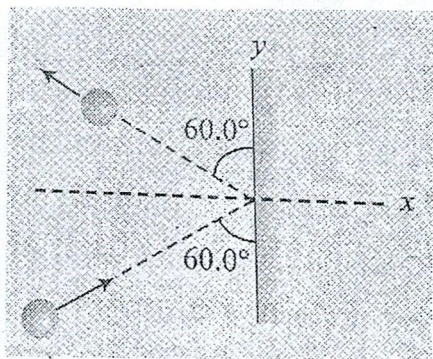
- A fighter plane flying horizontally at an altitude of 1.5 km with speed 720 km/hr passes directly overhead an anti-aircraft gun. At what angle from the vertical should the gun be fired for the shell with muzzle speed 600 ms^{-1} to hit the plane? At what minimum altitude should the pilot fly the plane to avoid being hit? (Take $g = 10 \text{ ms}^{-2}$).
19. A new system of units is proposed in which unit of mass is α kg, unit of length β m and unit of time γ s. How much will be the value of 5J in this new system?
20. At what angle should a projectile be thrown such that the horizontal range of the projectile will be equal to half of its maximum value? Show the working
21. Give four advantages of SI system of units.

OR

If unit of force, velocity and energy are 100 dyne, 10 cm/s and 400 ergs respectively, what will be the unit of mass and length?

[SECTION - C]

22. What is impulse? Give its SI unit. A 3 kg steel ball strikes a wall with a speed of 10.0 ms^{-1} at an angle of 60° with the surface of the wall. The ball bounces off with the same speed and at same angle. If the ball was in contact with the wall for 0.2 s, find the average force exerted by the wall on the ball.



23. A body of mass 0.3 kg is taken up an inclined plane through a length 10 m and height 5 m and then allowed to slide down to the bottom again. The coefficient of kinetic friction between the body and the plane is 0.15. What is the
- work done by the gravitational force in moving the body up the plane .
 - work done by the applied force in the upward journey.
 - work done by the frictional force over the round trip.
24. The acceleration experienced by a boat after the engine is cut off, is given by $\frac{dv}{dt} = -k v^3$ where k is a constant. If v_0 is the magnitude of velocity at cut off then find the magnitude of the velocity at time t after the cut off.

25. The speed of light (c), Gravitational constant (G) and Planck's constant (h) are taken as fundamental quantities in a new system of unit. Then find the dimension of length in this new system. [Given $h = \text{energy/frequency}$]
26. What is meant by "Centripetal acceleration"? Derive the expression for centripetal acceleration of a particle moving in a circular path of radius r .
27. A stone is dropped from the top of a tower 400 m high and at the same time another stone is projected upward vertically from the ground, along the same line, with a velocity of 100 m/s. Find when and where the two will meet.

OR

A balloon starts ascending at a constant acceleration of 2m/s^2 . When it is at a height of 100 m from the ground, a food packet is dropped from the balloon. After how much time and with what velocity will it reach the ground? Take $g=10\text{m/s}^2$

28. (a) How many significant figures are there in the following :
- (i) 3.0120 (ii) 0.006235 s. (iii) 0.23×10^{-3}
- (b) The equation of state of some gases can be expressed as $(P + \frac{a}{V^2})(V - b) = RT$, Here P is the pressure, V is the volume, T is the absolute temperature, R is the Universal Gas Constant and a , b are constants. Find the dimensional formula of constant a/b .

[SECTION D] (02x4=08 marks)

29. PRODUCT OF TWO VECTORS

Scalar product is represented by a symbol of dot between the vectors and thus it is also known as Dot product.

$$\vec{A} \cdot \vec{B} = A(B \cos \theta) = (A \cos \theta)B$$

Here, θ is the angle between vectors $\vec{A}$ and $\vec{B}$.

Thus, we can define Dot product between two vectors as the product of their magnitudes and cosine of the smaller angle between them.

The result of the Dot product or scalar product is a scalar quantity. We shall define another type of product of two vectors. This is known as Vector product. The result of the Vector product is always a vector quantity. There are some physical quantities which are defined in terms of Vector product.

Vector product of two vectors $\vec{A}$ and $\vec{B}$ is defined as follows:

$$\vec{C} = \vec{A} \times \vec{B} = (AB \sin \theta) \hat{n}$$

$AB \sin \theta$ is magnitude of the vector product where θ is the angle between the vectors. Here, unit vector $\hat{n}$ represents the direction of the vector product.

- (i) If $\vec{A} \cdot \vec{B} = |\vec{A} \times \vec{B}|$, then the angle θ between $\vec{A}$ and $\vec{B}$ will be [1]
- (a) 60° (b) 45° (c) 75° (d) 90°
- (ii) The value of λ for which two vectors $\vec{A} = 5\hat{i} + \lambda\hat{j} + \hat{k}$ and $\vec{B} = \hat{i} - 2\hat{j} + \hat{k}$ are perpendicular to each other is [1]
- (a) 2 (b) -2 (c) 3 (d) -3
- (iii) The angle between vectors $\vec{A} = 10\hat{i} + 10\hat{j} - 5\hat{k}$ and $\vec{B} = 10\hat{i} - 5\hat{j} + 10\hat{k}$ is [1]
- (a) 30° (b) 45° (c) 60° (d) 90°

(iv) What is the angle between $\vec{A}$ and $\vec{B}$, if $\vec{A}$ and $\vec{B}$ are the adjacent sides of a parallelogram drawn from a common point and the area of the parallelogram is $AB/2$? [1]

- (a) 30° (b) 45° (c) 60° (d) 90°

30. Consider an isolated system of n interacting particles. The mutual forces between the pairs of particles in the system cause changes in momentum of the individual particles. By third law, the mutual forces between any pair of particles are equal and opposite. By second law, the change in momentum for any pair of particles is $F\Delta t$ and $-F\Delta t$. Thus the momentum changes cancel in pairs and total momentum of the system remains constant. This leads to a fundamental principle of Physics called the Law of conservation of linear momentum. This law states that the total linear momentum of an isolated system of interacting particles is conserved. The recoil of a gun on firing, explosion of a bomb into different fragments due to internal forces, the working of rockets and jet planes, etc.; can be explained on basis of momentum conservation.

(i) A bomb of mass of 1kg is thrown up with a velocity of 100 m/s. After 5 seconds, it explodes into two parts. One part of mass 400 g comes down with a velocity of 25 m/s. Find the velocity of other part. [2]

(ii) A gun fires a bullet of mass 50 g with a velocity of 30 ms^{-1} . Because of this, the gun is pushed back with a velocity of 1 ms^{-1} . What is the mass of the gun? [1]

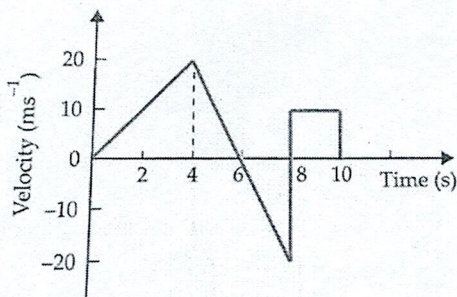
(iii) A particle of mass m moving with a velocity v collides with a stationary particle of mass $2m$ and moves together after collision. Find the final velocity of the system. [1]

[SECTION E] (03X5=15)

31. (A) Derive the following equations of motion -

(a) $S = ut + \frac{1}{2}at^2$ (b) $v^2 = u^2 + 2aS$.

(B) The velocity-time graph of a object moving along a straight line is shown in the figure below:



(a) Find the net distance covered by the object in the time interval between $t = 0$ to $t = 10\text{s}$

(b) Find the acceleration between $t = 0$ to $t = 4\text{s}$ and $t = 6\text{s}$ to $t = 8\text{s}$

OR

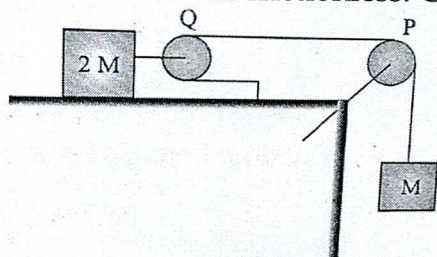
(A) An object traversed half the distance with a velocity v_0 . The remaining part of the distance was covered with velocity v_1 for half the time, and with velocity v_2 for the other half of the time. Find the mean velocity of the object averaged over the whole time of motion.

(B) A car accelerates from rest at a constant rate α for some time after which is decelerates at a constant rate β and comes to rest. If the total time elapsed is t , then calculate (i) maximum velocity acquired by car and (ii) the total displacement of car in terms of a , b and t .

32. (A) Write two laws of limiting friction.

Define Angle of repose. Deduce its relation with coefficient of limiting friction and hence show that Angle of repose is equal to Angle of friction.

(B) Consider the situation shown in figure (a). Both the pulleys and the strings are light and all the surfaces are frictionless. Calculate:



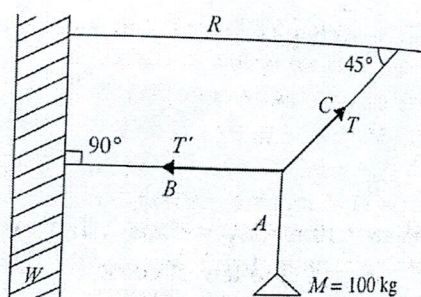
(i) the acceleration of mass M,

(ii) tension in the string PQ.

OR

(A) When a body slides down from rest along a smooth inclined plane making an angle of 45° with the horizontal, it takes time T. When the same body slides down from rest along a rough inclined plane making the same angle and through the same distance, it is seen to take time nT , where n is some number greater than 1. Calculate the coefficient of friction between the body and rough plane.

(B) A mass M of 100 kg is suspended by strings A, B and C as shown in given figure, where W is the vertical wall and R is a rigid horizontal rod. Find the tensions T and T' , if the suspended mass is in equilibrium.



33. A projectile is fired with a velocity u making an angle θ with the horizontal. Derive expressions for:

- time of flight
- maximum height
- horizontal range
- equation of trajectory of the projectile

OR

(A) State the Triangle law of vector addition. Derive expressions for the magnitude and direction of the resultant of two vectors $\vec{A}$ and $\vec{B}$ inclined at an angle θ with each other.

(B) The sum of the magnitudes of two forces acting at a point is 18 N and magnitude of their resultant is 12 N. If their resultant is at 90° with the force of smaller magnitude, what are the magnitudes of the forces?



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time -3 Hours

Subject - Chemistry
Maximum Marks- 70

General Instructions:

- (i) This Question Paper contains 33 questions. All questions are compulsory.
- (ii) Question paper is divided into FIVE sections - Section A, B, C, D and E.
- (iii) Section A - question number 01 to 16, are multiple choice type questions. Each question carries 01 mark.
- (iv) Section B - question number 17 to 21, is very short answer type questions. Each question carries 02 marks.
- (v) Section C - question number 22 to 28, is short answer type questions. Each question carries 03 marks.
- (vi) Section D - question number 29 and 30, are case-based questions. Each question carries 04 marks.
- (vii) Section E - question number 31 to 33, is long answer type questions. Each question carries 05 marks.
- (viii) There is no overall choice given in the question paper. However, an internal choice has been provided in few questions in all the sections except Section - A.
- (ix) Use of calculator is NOT allowed.

SECTION - A

1. 16 g of oxygen has same number of molecule as in
(a) 16 g of CO (b) 28 g of N₂ (c) 7 g of N₂ (d) 1 g of H₂
2. Total number of orbital associated with third shell will be
(a) 2 (b) 9 (c) 4 (d) 3
3. Which of the following associated is the correct order of size of the given species?
(a) $I > I^- > I^+$ (b) $I^+ > I^- > I$ (c) $I > I^+ > I^-$ (d) $I^- > I > I^+$
4. Which of the following species have the same shape?
(i) CO₂ (ii) CCl₄ (iii) O₃ (iv) NO₂⁻
(a) i and iv (b) i and ii (c) iii and iv (d) iii and ii
5. Mole fraction of solute in a 2 molal aqueous solution is
(a) 1.77 (b) 1.87 (c) 0.347 (d) 0.0347
6. Which of the following sets of quantum numbers represent an impossible arrangement ?

	n	l	m	s
(a)	3	2	-2	1/2
(b)	4	0	0	1/2
(c)	3	2	-3	1/2
(d)	5	3	0	-1/2

7. Which has the maximum negative electron gain enthalpy?
 (a) Cl (b) Br (c) I (d) F
8. Which of the following angle corresponds to sp^2 hybridization?
 (a) 90° (b) 120° (c) 180° (d) 109°
9. The radius of which of the following orbits is same as that of the first Bohr's orbit of H- atom?
 (a) $He^+(n = 2)$ (b) $Li^+(n = 3)$ (c) $Li^+(n = 2)$ (d) $Be^{3+}(n = 2)$
10. The electronic configuration of Metal M is $1s^2 2s^2 2p^6 3s^2$. Formula of its oxide will be.
 (a) MO (b) M_2O (c) M_2O_3 (d) MO_3
11. Angle between covalent bond is maximum in
 (a) CH_4 (b) BF_3 (c) PCl_3 (d) NH_3
12. No. of σ and π bond in benzene is
 (a) $3\pi, 12\sigma$ (b) $3\sigma, 12\pi$ (c) $6\pi, 6\sigma$ (d) 12π and 12σ

Assertion/Reasons Based Questions:

In the following questions, a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.

- (a) Assertion (A) and reason (R) both are correct statements and reason is correct explanation for assertion.
- (b) Assertion (A) and reason (R) both are correct statements, but reason is not correct explanation for assertion.
- (c) Assertion (A) is false but reason (R) is true statement.
- (d) Both (A) and (R) false.
13. **Assertion (A):** NaCl formed by the action of chlorine gas on Na metal is a stable compound.
Reason (R): This is because sodium & chloride ion acquire octet in NaCl formation.
14. **Assertion (A):** Electron gain enthalpy becomes less negative as we go down a group.
Reason (R): Size of the atom increases on going down the group and the added electron would be farther from the nucleus.
15. **Assertion (A):** Combustion of 16 g of methane gives 18g of water.
Reason (R): In the combustion of methane water is one of the product.
16. **Assertion (A):** All isotopes of a given element show same type of chemical behaviour.
Reason (R): Chemical properties of an atom are controlled by the number of electrons in the atom.

SECTION - B

17. Write difference between molarity and molality.
 Are 0.5 mole of NaOH and 0.5 M of NaOH solution same?
18. Show that the circumference of the Bohr orbit for hydrogen atom is an integral multiple of de Broglie wavelength associated with the electron revolving around the orbit.
19. Calculate the mole fraction of benzene in a solution containing 30% by mass of it in CCl_4 .
20. Applying VSEPR theory draw and mention the shape of (a) ClF_3 (b) PCl_5

21. Write any four characteristics of d-block element.

OR

Write any four characteristics of f - block element.

SECTION - C

22. Calculate the molality and molarity of 93% H_2SO_4 (w/v). The density of the solution is 1.84 g/mL.

23. (a) Explain black body radiation.

(b) What are the limitations of Bohr's model?

24. Give reasons:

(a) First ionization enthalpy of Nitrogen is more than oxygen.

(b) Noble gases have positive electron gain enthalpy.

(c) Negative electron gain enthalpy of F is less than that of chlorine.

OR

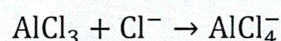
(a) Difference between electron gain enthalpy and electronegativity. (any two)

(b) Show by a chemical reaction with water that Na_2O is a basic oxide and Cl_2O_7 is an acidic oxide.

25. (i) Write the resonating structure for

(a) NO_3^- (b) CO_3^{2-}

(ii) Mention the change in hybridization of Al atom in the following reaction



26. What are the two longest wave length lines in the Lyman series of hydrogen spectrum.

$$[R_H = 109678 \text{ cm}^{-1}]$$

27. (a) Write the IUPAC name & symbol of the element with atomic no 110

(b) Assign position of the elements having outer electronic configuration $(n-1)d^3ns^2$ for $n = 4$.

(c) What do you mean by diagonal relationship.

28. (a) Write reason for exceptional electronic configuration of 'Cr'.

(b) Explain Pauli's exclusion principle with suitable example.

SECTION - D

The following questions are case-based questions. Read the case carefully and answer the following questions.

29. The dipole moment of a covalent molecule is linked to the polarity of the covalent bonds present and also to their geometries. In general linear and symmetrical molecules have zero dipole moment whereas bent and unsymmetrical molecules have specific dipole moment.

(a) Why is dipole moment of NH_3 is more than NF_3 ? Represent diagrammatically. [2]

(b) Out of NaCl and NaI , which is more covalent in nature and why? [1]

(c) CO_2 has zero dipole moment - Explain. [1]

OR

(c) Can a non polar molecule have a polar covalent bond?

30. The properties of elements which depend upon the electronic configuration of the elements are known as periodic properties. The main property like atomic radii, ionization enthalpy, electron gain enthalpy and electro negativity have opposite trends along a period and down the groups.

- (a) Write two factors on which ionization enthalpy depends. [2]
- (b) What do you mean by screening effect? [1]
- (c) Write iso electronics species of Kr(36). [1]

OR

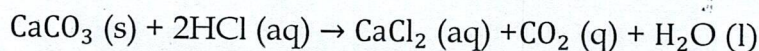
- (c) Write the correct order of increasing radii of the elements Na, S, Al & P.

SECTION - E

31. (a) In the combustion of methane, why is methane regarded as limiting reactant? Write limitation of law of constant proportion. [2]
- (b) A welding fuel gas contain carbon and hydrogen only. Burning a small sample of it in oxygen gives 3.38 g carbon dioxide, 0.690 g of water and no other product. A volume of 10 L (at NTP) of this welding gas is found to weigh 11.6g. Calculate (i) Empirical formulas (ii) Molar mass (iii) Molecular formula of the gas. [2+3]

OR

- (a) Explain Law of multiple proportion with example.
- (b) CaCO_3 reacts with aq HCl to give CaCl_2 and CO_2 according to the reactions



What mass of CaCO_3 is required to react completely with 25 mL of 0.75 M HCl?

32. (a) Explain the formation of H_2 molecule on the basis of Valence bond theory. [2]
- (b) Draw the diagram showing hybridization of C_2H_4 and explain. [2]
- (c) Write two differences between sigma and pi - bonds. [1]

OR

- (a) Give reason:
 - (i) Covalent bonds are directional while ionic bonds are non directional.
 - (ii) Bond angle in NH_3 is more than PH_3 . Explain.
- (b) Explain the hybridization of S in SF_6 , Draw its shape.
- (c) Draw Lewis dot structure of nitrite ion.

33. (a) (i) Mention difference between dx^2-y^2 and dxy . [2]
- (ii) State Heisenberg's uncertainty principle. [2]
- (b) If the photon of wavelength 150 pm strikes an atom, one of its inner bound electrons is ejected out with a velocity of $1.5 \times 10^7 \text{ ms}^{-1}$, Calculate the energy with which it is bound to the nucleus. [2+3]

OR

- (a) Write number of angular node and radial node for 3p orbital. [2]
- Write the electronics configuration of Fe^{2+} .
- (b) The Kinetic energy of an electron is $4.55 \times 10^{-25} \text{ J}$. The mass of electron is $9.1 \times 10^{-31} \text{ kg}$. Calculate velocity, momentum and wavelength of the electron. [2+3]



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time -3 Hours

Subject - Biology
Maximum Marks- 70

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 33 questions.
- (iii) Section-A has 16 questions of 1 mark each; Section-B has 5 questions of 2 marks each; Section- C has 7 questions of 3 marks each; Section- D has 2 case-based questions of 4 marks each; and Section-E has 3 questions of 5 marks each.
- (iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION A

1. Match the following columns and select the correct option:

Column I	Column II
A. Convolvulaceae, Solanaceae B. Gibbon C. Wheat D. <i>Anarcardiaceae</i>	1. Primata 2. Angiospermae 3. Polymoniales 4. Diptera 5. Poales

(A) A-4, B-3, C-2, D-2

(B) A-4, B-5, C-2, D-3

(C) A-2, B-5, C-4, D-3

(D) A-3, B-1, C-5, D-2

2. Which of the following is used in biochemical and genetic work?

- (A) *Claviceps*
- (B) *Aspergillus*
- (C) *Neurospora*
- (D) *Mucor*

3. The dominant generation in mosses is:

- (A) Sporophyte
- (B) Gametophyte
- (C) Both sporophyte and gametophyte are equal
- (D) None of the above

4. A taxon is

- (A) Genus
- (B) Order
- (C) Family
- (D) All the above

5. Identify the correct features of Mango and Coconut fruits.
 - (i) In both fruit is a drupe
 - (ii) Endocarp is edible in both
 - (iii) Mesocarp in Coconut is fibrous, and in Mango it is fleshy
 - (iv) In both, fruit develops from monocarpellary ovary. Select the correct option from below:
 - (A) (i), (iii) and (iv) only
 - (B) (i), (ii) and (iii) only
 - (C) (i) and (iv) only
 - (D) (i) and (ii) only
6. Which of the following is an example of axile placentation?
 - (A) Pea
 - (B) Mustard
 - (C) China rose
 - (D) Marigold
7. Which of the following animals are true coelomates with bilateral symmetry?
 - (A) Adult echinoderms
 - (B) Aschelminthes
 - (C) Platyhelminthes
 - (D) Annelids
8. Cortex is the region found between
 - (A) Epidermis and stele
 - (B) Pericycle and endodermis
 - (C) Endodermis and pith
 - (D) Endodermis and vascular bundle
9. Zygotic meiosis is characteristic of
 - (A) Marchantia
 - (B) Fucus
 - (C) Funaria
 - (D) Chlamydomonas
10. Which of the following features is not present in the phylum Arthropoda?
 - (A) Metameric segmentation
 - (B) Parapodia
 - (C) Jointed appendages
 - (D) Chitinous exoskeleton
11. The scar on the seed coat through which the developing seed was attached to the fruit is known as
 - (A) Testa
 - (B) Tegmen
 - (C) Hilum
 - (D) Micropyle
12. Bidder's canal is meant for the passage of
 - (A) Sperms
 - (B) Urine
 - (C) Ova
 - (D) Both (A) and (B)

Question No. 13 to 16 consist of two statements, Assertion (A) and Reason(R). Answer these questions selecting the appropriate option given below

- (a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion
- (b) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- (c) Assertion is true, but Reason is false
- (d) Assertion is false, but Reason is true

13. **Assertion (A):** Euglena is a plant due to the presence of chlorophyll .

Reason (R): Euglena cannot be classified on the basis of two kingdom system.

14. **Assertion (A):** Heterospory and retention of female gametophyte are responsible for origin of seed habit in *Selaginella*.

Reason (R): *Psilotum* is a living fossil.

15. **Assertion (A):** The vascular bundles of dicot stems are called open vascular bundles.

Reason (R): Dicot stems can make secondary xylem and secondary phloem with the help of cambium.

16. **Assertion (A):** A simple tissue is made of only one type of cells.

Reason(R): Various simple tissues in plants are parenchyma, collenchyma and sclerenchyma.

SECTION-B

17. What causes mad cow disease? What are its characteristics? Name the disease caused by it in humans.

18. Explain briefly the following terms with suitable examples:

- (i) Archegonium
- (ii) Gemma cup

19. What is the importance of pneumatic bones and air sacs in Aves ?

20. Distinguish between

- (i) Gametophyte and Sporophyte
- (ii) Hydrocolloids and Pyrenoids

Attempt either option A or B

21. (A) Name the modification (appendages) of epidermal cells and functions performed by them.

OR

(B)

- (i) What are bulliform cells?
- (ii) Mention its function.

SECTION-C

22. (A) What is Binomial nomenclature ?

(B) Mention the universal rules of nomenclature.

(C) Give the scientific name of Potato.

23. What are bacteriophages? Describe its basic structure. Name one plant and one animal disease caused by virus.

24. Distinguish between the three kinds of algae in terms of major pigments and stored food.

25. (A) Mention the role of the radula in Molluscs.

(B) Give one characteristic feature of Ctenophora.

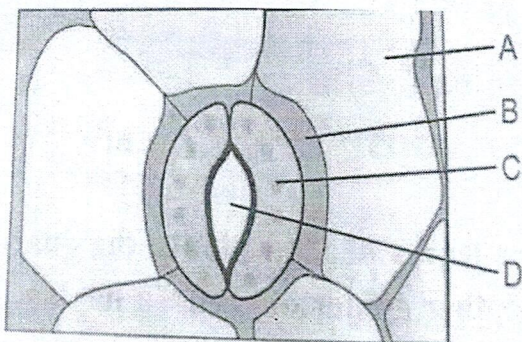
26. Explain the following with examples
- (A) Actinomorphic and zygomorphic flowers
 - (B) Epipetalous and Epiphyllous stamens
 - (C) syncarpous and apocarpous ovaries

Attempt either option A or B

27. (A) Give three anatomical differences between a dicotyledonous root and a monocotyledonous root.

OR

- (B) The diagrammatic representation of stomatal apparatus of a dicot plant is shown below. Answer the question that follow:



- (i) Identify the parts labelled A, B, C and D.
 - (ii) How does C differ from B?
28. (A) What is protective colouration ?
- (B) Differentiate between hibernation and aestivation.

SECTION D

29. All single celled eukaryotes are placed under Protista, but the boundaries of this kingdom are not well defined. This kingdom forms a link with the others dealing with plants, animals and fungi.
- (A) What is meant by "diatomaceous earth"? Give its uses.
 - (B) The pigments of euglenoids are identical to those present in higher plants. Yet they are not plants. Give the differences due to which it does not belong to the plant kingdom.

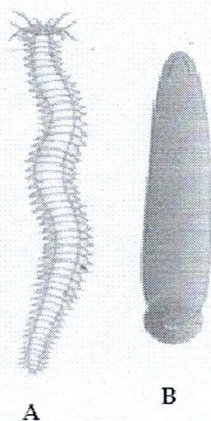
Attempt either subpart (C) or (D)

- (C) Differentiate between photosynthetic autotrophic bacteria and chemosynthetic autotrophic bacteria.

OR

- (D) Give two characteristics of Slime Moulds.

30. Two animals of Phylum Annelida are shown in the picture given below. Observe them and answer the questions that follow:



- (A) Identify and write the scientific names of the animals A and B.
(B) Write two major differences between them.
Attempt either subpart (C) or (D)
(C) Provide the appropriate technical term for lateral appendages in aquatic annelids.
OR
(D) What is metameric segmentation.

SECTION E

31. (A) Define coelom and classify animals into coelomates, pseudocoelomates, and acoelomates with one example each.
(B) How important is the presence of air bladder in Pisces?
(C) What is the notochord? State its significance in classification.
OR
(A) Write two differences between Chondrichthyes and Osteichthyes.
(B) What do you understand by the term metagenesis explain with example.
(C) Name any two mammalian features not found in other vertebrates.
32. (A) With help of a diagram describe different parts of a monocot seed. Give the function of coleoptiles and coleorhiza.
(B) Give two differences between dorsiventral leaf and isobilateral leaf.
OR
(A) Differentiate between **racemose** and **cymose** types of inflorescence (any two points).
(B) Based on the position of calyx, corolla and androecium on thalamus with respect to ovary describe the different kinds of flower. Give an example each.
33. (A) Draw a well labelled digestive system of frog and label any four parts .
(B) State one function of the liver and one function of the pancreas.
(C) Why is the intestine short in frogs compared to herbivores?
OR
(A) Explain the neural system in frog.
(B) Frogs exhibit sexual dimorphism. How is a male frog different from a female frog?
(C) What is cutaneous respiration.



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Computer Science
Maximum Marks- 70

General Instructions:

1. SECTION A consists of 21 questions each carry 1 mark.
2. SECTION B consists of 7 questions, each carries 2 marks.
3. SECTION C consists of 3 questions, each carries 3 marks.
4. SECTION D consists of 4 questions, each carries 4 marks.
5. SECTION E consists of 2 questions, each carries 5 marks.
6. Try to right down the answers in order.
7. Use Python Programming language only to write down the programming code.

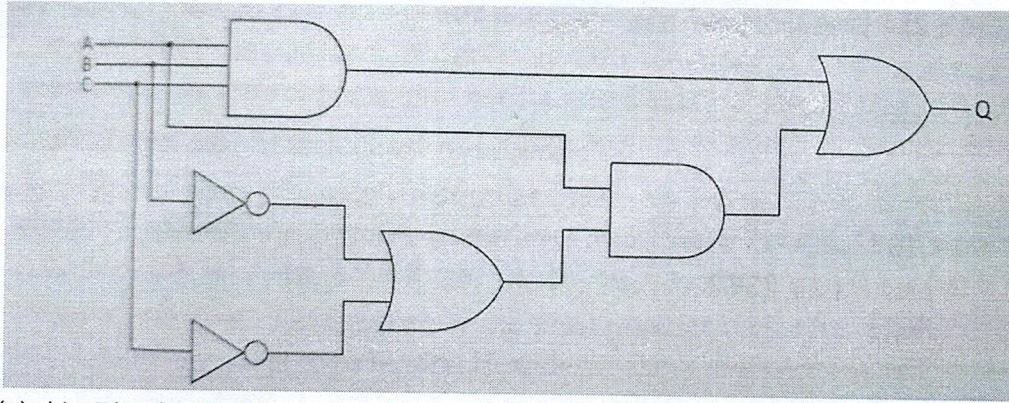
SECTION - A

Multiple Choice Questions:

[21 x 1 =21]

1. _____ reads a sequence of lines of different heights and widths that are printed on various types of products.
(a) OCR (b) OMR (c) MICR (d) Bar Code Reader
2. _____ uniquely identifies a person on the basis of physical or behavioural traits such as fingerprints, DNA, etc.
(a) Touchscreen (b) Biometric Sensor
(c) Optical Character Reader (d) QR Code
3. Which smaller unit of CPU directs and coordinates all activities within it and determines the sequence in which instructions are executed, sending instruction sequence to other smaller units?
(a) Control Unit (b) Arithmetic Logic Unit
(c) Processor (d) All of these
4. Convert the following into Kilobytes:
2.7 GB = Kilobytes
(a) 2831155.2 (b) 2764.8 (c) 2831155.02 (d) 2764.08
5. Which of the following is binary equivalent of $(43)_{10}$?
(a) $(101011)_2$ (b) $(110011)_2$ (c) $(110101)_2$ (d) $(110010)_2$
6. Which numbering system uses numbers and letters as symbols?
(a) Decimal (b) Binary (c) Octal (d) Hexadecimal

7. The Boolean expression of the following logic circuit is:



(a) $(A+B).C'+B$

(b) $A'B'+C+B'A$

(c) $A.B.C+(B'+C').A$

(d) $A+B+C'(A+B)$

8. A is a representation of a Boolean function or expression containing all possible combinations of input values and their result in a tabular format.

(a) Logic Gate

(b) Truth Table

(c) Tautology

(d) None of these

9. and are called Universal gates.

(a) XOR and OR

(b) AND and OR

(c) NAND and NOR

(d) None of these

10. What is an Algorithm?

(a) A set of steps to solve a problem

(b) Software that analyzes data

(c) A hardware device that stores data

(d) All of these

11. What shape represents a decision in a flowchart?

(a) Diamond

(b) Rectangle

(c) Oval

(d) Parallelogram

12. You don't have to pay for Python and you can view its source code too. It means Python is -

(a) Freeware

(b) Free and Open source

(c) Open source

(d) Shareware

13. The interactive interpreter of Python is termed as

(a) Python shell

(b) Python Script mode

(c) Python Editor mode

(d) Python command line

14. Which of the following are the fundamental building blocks of a Python program?

(a) Identifiers

(b) Constants

(c) Punctuators

(d) Tokens

15. What will be the output of the following code snippet?

```
x, y = 2, 6
```

```
x, y = y, x+2
```

```
print(x,y)
```

(a) 6 6

(b) 4 4

(c) 4 6

(d) 6 4

16. The extension of a Python file is given as:
 (a) .pt (b) .pwy (c) .py or .pyw (d) .yppy
17. The reserved words used by Python interpreter to recognize the structure of a program are termed as
 (a) Identifiers (b) Tokens (c) Literals (d) Keywords
18. What is the result of this statement?
`>>> 10>5 and 7>12 or not 18>3`
 (a) 10 (b) True (c) False (d) None
19. Symbol used to end the if statement:
 (a) Semicolon (;) (b) Hyphen(-) (c) Underscore (_) (d) Colon (:)
20. What abandons the current iteration of the loop?
 (a) pass (b) break (c) stop (d) infinite
21. In Python, which of the following will create a block in a compound statement?
 (a) colon (b) statements indented at a lower, same level
 (c) indentation in any form (d) { }

SECTION - B

22. What types of operations are provided by an operating system? [2]
23. Verify DeMorgan's law with the help of Truth Table. [2]
24. Draw a flowchart to display sum of the following series: [2]

$$S = 1! + 2! + 3! + \dots + 10!$$
25. WAP to swap two numbers using a third variable. [2]
26. Find error(s) in the following code and correct it by rewriting the code and underline the corrections: [2]

```

x = int("Enter value for x:")
for in range[0,11]:
    if x = y
        print x+y
    else:
        Print x - y
  
```
27. What is the difference between break and continue statement? Illustrate it with an example. [2]
28. WAP that reads two numbers and an arithmetic operator and displays the result. [2]

SECTION - C

29. Why are language processors used? What is the difference between a Compiler and an Interpreter? [3]
30. WAP to perform the following task according to the user's choice using menu.
(a) Area of Circle (b) Area of Rectangle
(c) Circumference of Circle (d) Area of Square [3]
31. WAP to accept a number and display whether the number is a Palindrome or not. [3]

Note: A palindrome number is a number that reads the same backward as forward. In other words, the digits of the number are symmetric. Ex: 12321

SECTION - D

32. (a) Draw a circuit diagram for the following Boolean expression:

$$[(A'+B'+C')' \cdot (A'+B') \cdot (A'+C')]' \quad [2]$$

- (b) Verify the following using truth table:

$$X + Y \cdot Z = (X+Y) \cdot (X+Z) \quad [2]$$

33. (a) What output will be produced by the following code? [2]

A, B, C, D = 9.2, 2.0, 4, 21

print (A/4)

print (A//4)

print (B ** C)

print (A * B)

- (b) Give the output for the following expressions:

(i) $(5 < 10) \text{ and } (10 < 5) \text{ or } (3 < 18) \text{ and not } 8 < 18$ [1]

(ii) A, B, C = 9, 12, 3 [1]

$$X = A - B / 3 + C * 2 - 1$$

$$Y = A - B / (3+C) * (2-1)$$

$$Z = A - (B / (3+C) * 2) - 1$$

print ("X =", X)

print ("Y =", Y)

print ("Z =", Z)

34. (a) WAP to accept a character (either in uppercase and lowercase) from the user and display whether it is a vowel or consonant. [2]

- (b) WAP to accept a character and display if it is an uppercase character, lowercase character, digit or a special character. [2]

35. (a) WAP to enter a number and check if it is a prime number or not. [2]

(b) WAP to print Fibonacci series up to a certain limit. [2]

Note : The Fibonacci series is a sequence of numbers where each number is the sum of the two preceding ones, starting from 0 and 1

Ex: 0, 1, 1, 2, 3, 5, 8, 13,

SECTION - E

36. Perform the following conversions: [5 × 1 = 5]

(a) $(62.325)_{10} = (\dots\dots\dots)_2$

(b) $(101101)_2 = (\dots\dots\dots)_{16}$

(c) $(76F)_{16} = (\dots\dots\dots)_{10}$

(d) $(ABCD)_{16} = (\dots\dots\dots)_8$

(e) $(7654)_8 = (\dots\dots\dots)_{16}$

37. WAP to print the following patterns logically: [2 × 2.5 = 5]

(a) 1

2 3

4 5 6

7 8 9 10

(b) A

B C

D E F

G H I J



DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Half Yearly Examination 2025

Class: XI

Subject: Informatics Practices (065)

Max Marks: 70

Time: 3 Hours

General Instructions:

- There are 4 sections (I, II, III, IV)
- Group-A contains 20 marks, MCQ Type, attempt 20 questions (20X1=20) & choose the best option.
- Group-B contains a total of 32 marks questions of 2 marks each i.e. 16X2=32)
- Group-C contains a total of 18 marks questions of 3 marks each i.e. 6X3=18
- Keep a margin at the left side of your answer script & clearly write the Question Numbers
- Try to maintain the order of the questions in each group while answering.
- Keep spaces and mark 'line-of-separation' in between two answers.

GROUP-A

[Attempt 20 Questions, 20X1=20]

Q1. Answer the following questions (Objective type):

[20X1=20]

- 1) In the CPU, CU controls: [1]
(A) Flow of data between Input Unit & Output unit (B) Flow of data between Memory unit & ALU
(C) Both i & ii are correct (D) Both i & ii are wrong
- 2) FAT is _____ and located at _____: [1]
(A) Flow Allotment Table, (located at) disk (B) File Attachment Tag (located at) sector
(C) File Allocation Table (located at) track (D) Flow Attainment Tag (located at) memory
- 3) RAM works to store: [1]
(A) Temporary files (B) System files (C) Cookies (D) None of these
- 4) Difference between 4th Generation Language (4GL) and 3rd Generation Language (3GL) is/are: [1]
(A) 3GL has High Data management skills, but 4GL has Low Programming skills
(B) 3GL has High Programming skill but 4GL has High Data Managing Skill
(C) 3GL has High Programming skill but 4GL has Low Data Managing Skill
(D) 3GL has Low Programming skill but 4GL has High Programming Skill
- 5) When one assigns a value to a variable, then the existing value of the variable gets: [1]
(A) Deleted (B) Increased (C) Replaced (D) Assigned 0
- 6) The rhombus symbol in a flowchart works to: [1]
(A) Make a decision (B) Control data flow (C) None of i, ii (D) Both i, ii

- (7) Algorithm is: [1]
 (A) To describe the programming commands (B) To describe the programming variables
 (C) To describe the programming data (D) To describe the programming logic
- (8) The: (colon) is put _____ [1]
 (A) Before *for* (B) After *while* (C) Between *if....else* (D) Between *elif*
- (9) The _____ operator gives TRUE output when both of the conditions are correct. [1]
 (A) AND (B) OR (C) NOT (D) NOR
- (10) Indent sets a _____ (A) Block (B) Space (C) Data flow (D) Statement [1]
- (11) The difference between / & // operators respectively is: [1]
 (A) Give decimal & integer quotient (B) Give integer & decimal quotient
 (C) Give quotient & remainder (D) Give remainder & quotient
- (12) Which of the following is the correct functionality of the range() function? _____ [1]
 (A) It begins from 1 (B) 3 arguments are must (C) Runs up to final-value minus 1 (D) All
- (13) Flowchart depicts the _____ representation of the programming logic. [1]
 (A) Logical (B) Graphical (C) Mathematical (D) Relational
- (14) print(x[: -2]) gives the output _____ to _____ elements of a list x. [1]
- (15) Which of the following characters does Not fit in a List? [1]
 (A) Mutable (B) Homogeneous (C) Has +ve & -ve index (D) 2D Array
- (16) For multiple-line comments, we use: [1]
 (A) ' ' (B) # # (C) ! ! (D) " " "
- (17) Break terminates: [1]
 (A) If...else block (B) Loop block (C) Both A & B (D) None A or B
- (18) Difference between while() and for() loop in terms of placement(s) of statement(s) is/are: [1]
 (A) initialisation (B) increment/decrement (C) Both i & ii (D) None i & ii
- (19) The difference between = & == respectively are: [1]
 (A) Equality & Similarity (B) Assignment & Equality
 (C) Both i & ii (D) None i & ii
- (20) Find the right option of the following question based on the Assertion and Reasoning: [1]
Assertion (A): A variable name in Python cannot be a keyword, like if or while.
Reasoning (R): Python keywords are reserved words with special meanings and cannot be used for user-defined identifiers.
- (A): Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.
 (B): Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
 (C): Assertion is true, but Reason is false.
 (D): Assertion is false, but Reason is true.

GROUP-B [16X2=32 marks]

21) Ramash joined a Software-Development Project, where some case studies have been assigned to Ramash. On that basis, help him to answer the following questions to write notes for the project:

- (i) Write a note on the types of Software, explaining with a diagram. [2]
- (ii) Write Disk Memory Management System in the disk, with a diagram. [2]
- (iii) How does Cache-Memory connect RAM and CPU? [2]
- (iv) Explain three different types of Programming concepts, with examples. [2]
- (v) Write the difference between Syntax Error and Logical Error, with examples. [2]

22) Answer the following questions on writing logic for a Software Development program:

- i) Answer the following: [2]
 - (a) Write an algorithm to calculate the Total and Average Marks of a class out of 5 subjects (to be entered by the user) of Full marks 100 each.
 - (b) Write an algorithm to input two numbers (using 3rd variable) from the user and Swap & print.
- ii) Draw a menu-driven flowchart to input 2 numbers and a choice (i.e. 1,2,3) to calculate as given: [2]

Choice	Function
1	Find the area of a rectangle after inputting Length (L) & Breadth (B)
2	Also find the Perimeter of the rectangle
3	Termination of the flow of coding

- iii) Draw a flowchart to find the sum of even and odd numbers within 50, in the same flowchart. [2]
- iv) Draw a flowchart to find the input of a number and find the reverse of the same. [2]
- v) Show the steps to find the output of the following statement, if x=10, y=20 & z=30. [2]
$$!((x!=y) \text{ AND } (y<=z)) \text{ OR } (!(z==x) \text{ AND } (y>z))$$

23) Write a Python code to enter a number and check if the number is a Palindrome or not. [2]

24) Write a Python code to: [2]

- (i) print "Aryan" from a string "Indo Aryan"
- (ii) print Tuesday to Friday from a Tuple, given below:

`x=('Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sunday')`

25) Write a Python program to find $s=(1)+(1+2)+(1+2+3)+\dots$ Nth term. [2]

26) Write a Python code to create a list $L=[10,20,30,40,50,60,70,80,90,100]$ and perform the followings: [2+2=4]

- (i) (a) Display 2nd to 4th elements from the list using +ve index.
(b) Display the last 5 elements from the list.
- (ii) (a) What is the output of: `print (L [-5 : 8])`
(b) Find the output of the following code:

`L[3]=300
print(L)`

(27) Write a Python code to create an empty list (List), then using a statement, initialise it with five zeros(0), then replace it with any five numeric values taken/input from/by the user. [2]

GROUP-C

[6X3=18 marks]

- (28) Write a Python program to enter age and display the group-wise colour as given below: [3]
- | Age range | Group |
|------------|--------|
| 1-20 | White |
| 21-40 | Red |
| 41-55 | Green |
| 56 & above | Yellow |
- (29) Correct the error(s) if there is/are, and rewrite the code using a while loop, then underline the corrections (if there is/are), and finally write the output: [3]
- ```
n=5
s=0
for i in Range(n)
 s=s+(i+1)
print(s)
```
- (30) Write a Python program to find the following output: [3]
- ```
*
* *
* * *
```
- (31) Write a program to enter a value and check whether it is present in the following list. If it is, then print "Number Found"; otherwise, print "Number not Found": [3]
- L=[10,20,30,40,50,60,70,80,90,100]
- (32) Write a Python program as asked below: [3X1=3]
- (i) Create a 2D list (**Lst**) initialised by 0, where the no. of rows & columns will be input by the user.
 - (ii) Update the list by user input values
 - (iii) Print row-wise sum of the array.
- (33) Write a Python function (**any six**) as given below on the list L=[30, 50, 25, 45, 75, 55]: [0.5X3=3]
- (i) Delete the 3rd element
 - (ii) Rearrange the list (original) in descending order
 - (iii) Replace the 4th element of the list (original) by 54
 - (iv) Insert an element 65 as the last element
 - (v) Print the number of elements present in the list
 - (vi) Print the element of the list (original) in reverse order
 - (vii) Display the maximum value of the list (original)
 - (viii) Remove all the elements of the list

###



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Accountancy
Maximum Marks-80

General Instructions:

1. This Question Paper contains 34 questions and all questions are compulsory.
2. Attempt all parts of a question at one place. Subsequent parts of a question may not be awarded marks in case if they are attempted at different places.
3. Write the Question No. at ONE PLACE only.
4. Draw Suitable Formats and Narrations for practical questions to avoid deduction of $\frac{1}{4}$ th of the total marks of that particular question however no marks shall be awarded for drawing only formats.
5. Show working notes for practical questions, where applicable.
6. Read the question carefully and answer to the point.

1. GST paid and claimed as Input GST is not reversed if the goods purchased are _____
(a) Donated to an NGO
(b) Returned to the seller
(c) Consumed or utilized in the business
(d) Withdrawn by the proprietor for his personal use [1]
2. **Assertion (A):** Cash account is debited on receipt of amount.
Reason (R): Cash account being a real account or an asset account is debited on receipt of cash.
Select the correct answer from the following:
(a) Assertion (A) is correct, but Reason (R) is wrong.
(b) Both Assertion (A) and Reason (R) are correct, but Reason (R) is not the correct explanation of Assertion (A).
(c) Both Assertion (A) and Reason (R) are correct, and Reason (R) is the correct explanation of Assertion (A).
(d) Both Assertion (A) and Reason (R) are wrong. [1]
3. When goods are purchased against cash, the purchaser will get _____
(a) Cash Memo (b) Invoice (c) Credit Note (d) None of these [1]
4. Imprest amount Rs.5,000. What will be the amount of re-imburement if the following Expenses were incurred by the petty cashier during the month:
Telephone expenses Rs.1,450; Refreshments Rs.1,050; Minor Repairs Rs.500;
General expenses Rs.400. [1]
(a) Rs.1,600 (b) Rs.3,400 (c) Rs.3,050 (d) Rs.3,000
5. Difference in the Balance of Cash Book (Bank Column) and Pass Book can be because of ____
(a) Errors in recording the entries either in the Cash Book or Pass Book
(b) An entry being recorded in either of the books before the date of BRS and in the other book after the date of BRS.
(c) Complete omission of an entry in Cash Book or Pass Book
(d) All of these [1]

6. What will be the amount of capital in opening entry, if the following balances appear in the books of Manpreet and Sons? [1]
 Assets : Cash in Hand Rs. 430; Cash at Bank Rs. 2,675; Sundry Debtors Rs. 7,495;
 Closing Stock Rs. 9,000; Machinery Rs. 6,000;
 Liabilities: Creditors Rs. 5,600
 (a) Rs. 20,000 (b) Rs. 10,600 (c) Rs. 25,600 (d) Rs. 15,000
7. Which of the following is an Intangible Asset? [1]
 (a) Equipment (b) Investments
 (c) Computer Software (d) None of these
8. Which of the following is not a business transaction? [1]
 (a) Bought Furniture for Rs. 1,00,000 for Business
 (b) Paid for Salaries of Employees Rs. 25,000
 (c) Paid Son's School Fees from Personal Savings Bank Account Rs. 5,000
 (d) Paid Daughter's School Fees from the Business Rs. 1,000
9. Interest on Drawings Charged and Interest on Capital Allowed in context with Accounting Equation, will ____ [1]
 (a) Decrease Owner's Capital (b) Increase Owner's Capital
 (c) Both (a) and (b) above (d) None of these
10. Which of the following statements is FALSE? [1]
 (a) Decrease in one Liability may lead to decrease in another Liability.
 (b) Difference between Total Assets and External Liabilities is Net Worth.
 (c) Purchase of goods on credit means Increase in Asset and Increase in Liability.
 (d) Sale of Machinery at loss will Decrease the amount of Total Assets.
11. **Assertion (A):** If Cash Book is maintained, Cash Account is not opened in the ledger.
Reason (R): Cash Book serves the purpose of Cash Account also.
 Select the correct answer from the following: [1]
 (a) Both Assertion (A) and Reason (R) are correct, but Reason (R) is not the correct explanation of Assertion (A).
 (b) Both Assertion (A) and Reason (R) are correct, and Reason (R) is the correct explanation of Assertion (A).
 (c) Assertion (A) is correct, but Reason (R) is wrong.
 (d) Both Assertion (A) and Reason (R) are wrong.
12. Purchase of Machinery on Credit Basis shall be recorded in ____ [1]
 (a) Journal (b) Journal Proper (c) Purchases Book (d) Cash Book
13. Rohan has returned the goods worth Rs. 6,000 to Karan as he found them defective. Which document will be prepared by Rohan? [1]
 (a) Debit Note (b) Credit Note (c) Invoice/Bill (d) None of these
14. Due to which of the following, Contingent Liabilities are shown in the Balance Sheet? [1]
 (a) Consistency Concept (b) Full Disclosure Concept
 (c) Cost Concept (d) None of these
15. ____ is the process of transferring entries from Journal to Ledger. [1]
 (a) Recording (b) Posting (c) Drafting (d) None of these

16. The cost of a small calculator is accounted as an expense and not shown as an asset in the financial statements of a business entity, though it is used for long number of years, due to _____
 (a) Objectivity Concept (b) Materiality Concept
 (c) Conservatism Concept (d) None of these [1]
17. Paid to Varun Rs 24,500 in full settlement of Rs.25,000. Posting of the difference of Rs. 500 will be made to which of the following ?
 (a) Debit side of Varun's A/C (b) Credit side of Varun's A/C
 (c) Debit side of Discount A/C (d) Credit side of Discount A/C [1]
18. Unfavourable bank balance means _____
 (a) Credit balance in the Cash book (b) Credit balance in the Pass book
 (c) Debit balance in the Cash book (d) None of these [1]
19. Accounting Standards in India are issued by _____
 (a) ICAI (b) ICMAI (c) ICSI (d) IIM [1]
20. **Statement I:** 'Accounting Standards enhance comparability of financial statements, both intra and inter business enterprises.'
Statement II: 'Accounting Standards are mandatory for Sole Proprietorship Firms.'
 Choose the correct option from the following:
 (a) Statement I is correct and II is wrong
 (b) Statement II is correct and I is wrong
 (c) Both the statements are correct
 (d) Both the statements are incorrect [1]
21. State the meaning of the following and give two examples each.
 (i) Current Assets
 (ii) Current Liabilities
 (iii) Expenses [3]
- (OR)
- What do you mean by Accounting? State any two advantages of Accounting.
22. Identify a Nation Wide Tax seeking to unify several indirect taxes and is based on principle of 'One Nation, One Tax'. Identify it and explain any two characteristics of it. [3]
23. (a) Yamuna commenced business on 1st April, 2024 with a Capital of Rs. 50,00,000 and a Loan of Rs. 10,00,000 borrowed from Bank. On 31st March, 2025, his Assets were Rs. 80,00,000. Calculate his Closing Capital and Profits earned during the year.
 (b) If in the above case, the proprietor had introduced additional capital of Rs. 4,00,000 and had withdrawn Rs. 1,00,000 for his personal purposes, calculate his profits. [3]
24. Name the Accounting Principles in the following cases and give a suitable example.
 (One Each)
 (i) All Costs incurred during a particular period should be charged to revenue of that period for determining the net profits.
 (ii) Everything a firm owns, it also owes out to somebody, may be owners or outsiders.
 (iii) It is assumed that business will continue to exist for a long period of time in future. [3]

25. Draw Journal Entries for the following transactions in the books of M/S Chaman Lal & Sons.
- Goods worth Rs. 20,000 were used by the proprietor
 - Charge depreciation @ 10% p.a. for two months on Machinery costing Rs. 3,00,000.
 - Provide Interest on Capital @ 6% p.a. for 9 months on Capital amounting to Rs. 15,00,000.
 - Raju who owed Rs. 20,000 to M/S Chaman Lal & Sons was declared insolvent and a final dividend of 60 paise in a rupee had been received from his estate by cheque and it was deposited in the bank on the same day.

[4]

26. Prepare a Sales Book from the following information in the books of Karan Furniture Mart, Ranchi 2023

Jan 3	Sold to Shyam Furniture mart, Ranchi 150 Chairs @ Rs.2,000 each 50 tables @ Rs. 5,000 each Trade Discount 20%
Jan 10	Sold to Kapil furniture stores, Patna 10 Almirahs @ Rs. 12,000 each 10 Sofa sets @ Rs. 20,000 each Trade discount @ 40%
Jan 18	Sold to Vijay furniture traders, Ranchi 50 chairs @ Rs.1,500 each 100 tables @ Rs.2,000 each Trade discount 20%
Jan 25	Sold to Vinay furniture mart, Gaya. 100 tables @ Rs.2,000 each 100 chairs @ Rs. 1,000 each Trade discount 50%

[4]

27. Qualitative Characteristics of Accounting are the attributes of accounting information which tend to enhance its understandability and usefulness. Explain.

[4]

28. From the point of view of timing of recognition of revenue and costs, there can be two broad approaches to accounting, known as Basis of Accounting. Explain the two basis of accounting briefly.

[4]

(OR)

Explain the following briefly:

- Accounting period concept
- Business entity concept

29. Draw Journal Entries for the following transactions in the books of Horizon Traders assuming that all transactions have taken place in the state of Jharkhand.

Assume CGST @ 9% and SGST @ 9%.

(Ignore Journal Entry for Set Off of GST)

[4]

2024	
March 5	Purchased goods for 5,00,000 from Barun Traders, at 20% Trade Discount
March 15	Sold goods to Pranav Bros. for Rs. 3,20,000 and received a cheque for Rs. 2,00,000. Cheque is sent to bank for collection
March 20	Purchased Furniture for Rs. 50,000 and payment made by cheque.
March 31	Advertisement Charges of Rs. 20,000 paid by cheque

30. Prepare a Trial Balance as at March 31, 2024 based on the following balances:

[4]

Name of the Account	Amount (Rs)
Capital	1,00,000
Drawings	16,000
Machinery	25,000
Sales	2,00,000
Purchases	2,10,000
Sales Return	20,000
Purchase Returns	30,000
Wages	40,000
Goodwill	60,000
Interest received	15,000
Discount Allowed	6,000
Bank Overdraft	22,000
Bank Loan	90,000
Debtors:	
Kamala	50,000
Vimala	20,000
Creditors:	
Reeta	35,000
Geeta	25,000
Cash	54,000
Stock on April 01, 2023	16,000

31. Ramakant had the following transactions in an accounting year :

- Commenced business with cash Rs. 1,00,000.
- Paid into bank Rs. 20,000.
- Purchased goods for cash Rs. 40,000 and on credit Rs. 60,000.
- Sold goods for cash Rs. 80,000, costing Rs. 60,000.
- Rent paid Rs. 1,000 and Rent Outstanding Rs. 200.
- Bought Furniture Rs. 10,000 and paid by cheque.
- Bought refrigerator for personal use Rs. 10,000.
- Purchased Motorcycle for cash. Rs. 40,000.

Prepare an Accounting Equation to show the effect of the above and also prepare Balance Sheet.

[6]

32. Record the following transactions in the double column cash book with Cash and Bank columns.

2024

	Rs.
Feb 1 Cash - in - hand	4,000
Bank - Overdraft	6,000
Feb 3 Received from Ram a cheque and deposited into bank	7,000
Feb 4 Purchased goods by cheque	5,500
Discount received	300
Feb 6 Deposited into bank	3,000
Feb 7 Received from Shyam	20,000
Discount allowed	200
Feb 8 Cash sales after Trade discount of 10%	30,000
Feb 12 Withdrawn from bank for office use	6,000
Feb 16 Paid for advertisement	1,500
Feb 17 Goods sold to Gopal and received a cheque (cheque deposited into bank on the same day)	10,000
Feb 29 Paid rent by cheque	3,000
Feb 30 Bank charges	50

[6]

33. Journalise the following transactions in the books of Mukhesh Bros.

[6]

2024	
Mar 1	Mukhesh Commenced Business with Cash Rs. 50,000
Mar 2	Purchased goods for cash Rs. 10,000
Mar 4	Purchased goods from Mohan, Delhi. Rs. 60,000
Mar 6	Opened a bank account with Bank of India Rs. 12,000
Mar 10	Purchased office furniture Rs. 2,000
Mar 15	Sold Goods for cash Rs. 8,000
Mar 20	Sold goods to Ram of the List Price of Rs. 1,25,000 less 20% Trade Discount.
Mar 21	Ram paid 40% of the good sold to him by cheque less 2% Cash Discount. Cheque deposited in bank on the same day.
Mar 27	Ram returned goods of sale value Rs. 5,000
Mar 31	Paid Salaries Rs. 9,000
Mar 31	Rejected and returned 5% of goods supplied by Mohan.
Mar 31	Paid to Petty Cashier Rs.3,000

34. On 31st December, 2024, Bank Column of the Cash Book of Ghanshyam showed balance of Rs. 24,000 but the Pass Book showed a different balance due to the following reasons:

- Cheques paid into the bank Rs. 16,000 but out of these cheques of Rs. 13,000 credited by bank till 31st, December, 2024.
- The receipts column of Cash Book undercast by Rs. 400.
- On 29th December, a customer deposited Rs. 6,000 directly in the Bank Account but it was entered in the Pass Book only.
- Cheques of Rs. 18,400 were issued of which Rs. 4,400 were presented for payment on 15th January 2025.
- Pass Book shows a credit of Rs. 660 as interest and a debit of Rs. 120 as bank charges.
- The bank had wrongly debited the account of Ghanshyam by Rs. 4,000, which was rectified after 31st December, 2024.

Prepare Bank Reconciliation Statement as on 31st December, 2024.

[6]



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Business Studies
Maximum Marks-80

General Instructions:

1. This question paper contains 34 questions.
2. Marks are indicated against each question.
3. Answer should be brief and to the point.
4. Answers to the questions carrying 3 marks may be from 50 to 75 words.
5. Answers to questions carrying 4 marks may be about 150 words.
6. Answers to the questions carrying 6 marks may be about 200 words.
7. Attempt all parts of the question together.

1. Profit may be regarded as an essential objective of business firms because profit _____
(a) Is a source of income for business persons
(b) Indicates the efficient working of business
(c) Builds the reputation of a business enterprise
(d) All of these [1]
2. According to the Companies Act, the limit of minimum subscription is _____ percent of the size of the issue of shares.
(a) 100 (b) 95 (c) 90 (d) 85 [1]
3. As per Corporate shareholdings filed for March 31, 2020, The President of India publicly holds 68 stocks with a net worth of over Rs. 8,56,828.1 crore. Name the form of public sector enterprise whose shares are issued in the name of The President of India.
(a) Statutory Corporation (b) Global Company
(c) Government Company (d) None of these [1]
4. Which of the following is a fund transfer system that facilitates the instant and individual settlement of high value transactions between banks?
(a) National Electronic Fund Transfer (b) Real Time Gross Settlement
(c) Both (a) and (b) (d) None of these [1]
5. A Network of Computers used for placing orders, monitoring production and delivery of components and making payments is known as _____
(a) B 2 C Commerce (b) B 2 B Commerce
(c) Intra B Commerce (d) None of these [1]
6. Mridul works as a marketing head in a company. He always encourages his subordinates to communicate through e - mail and so that the management can have them on real time basis. Identify the aspect of e - business being highlighted in the above statement?
(a) C 2 C Commerce (b) B 2 B Commerce
(c) Intra B Commerce (d) B 2 C Commerce [1]

7. Registration is compulsory in which of the following forms of business organizations?
 (a) Partnership and Joint Stock Company
 (b) Joint Hindu Family Business and Sole Proprietorship
 (c) Co - Operative Societies and Joint Stock Company
 (d) None of these [1]
8. Which of the following Hundi is payable to any person -- no liability over who received payment?
 (a) Nam- Jog Hundi (b) Sah - Jog Hundi
 (c) Dhani- Jog Hundi (d) Firman- Jog Hundi [1]
9. Match the following:
- | Column A | Column B |
|-----------------------|---|
| (i) Dormant partner | (a) Allows the use of his/her name by a firm |
| (ii) Active partner | (b) Whose association with the firms is unknown to the general public |
| (iii) Nominal partner | (c) Participates in the management of the firms |
| (iv) Secret partner | (d) Does not participate in the management of the firms |
- (a) (i) - (d); (ii) - (c); (iii) - (a); (iv) - (b)
 (b) (i) - (c); (ii) - (d); (iii) - (a); (iv) - (b)
 (c) (i) - (d); (ii) - (c); (iii) - (b); (iv) - (a)
 (d) None of these [1]
10. Identify, the type of manufacturing industry in which basic raw materials are analysed and separated into different finished products, from the following.
 (a) Processing Industry (b) Analytical Industry
 (c) Synthetical Industry (d) None of these [1]
11. Which of the following statement is False?
 (a) In case of Joint Hindu Family business on the death of Karta, the next eldest family member takes over the position of Karta.
 (b) The decisions of the Karta are binding on all the Co-Parceners in case of a Joint Hindu Family Business.
 (c) In case of Joint Hindu Family Business the membership can be acquired only when a family member becomes 18 years of age.
 (d) The liability of all the members except Karta is limited to their share of Co-Parcenary property of the Joint Hindu Family Business. [1]
12. Yash's current account balance is Rs. 16,000 and he issues a cheque of Rs. 19,000 in favour of a creditor. However, the bank does not dishonor his cheque due to insufficient balance. This is because of prior arrangement he had done with bank to overdraw his account. Identify the type of banking service being described in the above lines.
 (a) Cash Credit (b) Overdraft
 (c) Demand Draft (d) None of the above [1]
13. Ankit owns a business of manufacturing hospital disposables. He has taken a group life insurance policy covering all his staff members. Whenever, a new employee joins the firm his/her name is added to the list of employees covered in the policy. Likewise, when an employee leaves the firm his/her name is removed from the list. Identify the principle of insurance applicable in the above case.
 (a) Indemnity (b) Insurable Interest
 (c) Utmost Good Faith (d) Proximate Cause [1]

14. Which of the following grew as a major trade centre of textile industry and became famous for beautiful gold silk cloth and sandalwood workmanship?
 (a) Pataliputra (b) Peshawar
 (c) Varanasi (d) None of these [1]
15. In India, in the year 2005, the JJ Irani Expert Committee recommended the formation of One Person Company. OPC is a company with only one person as a member and shareholder of the company. That one person shall be ____
 (a) A Natural Person (b) A Citizen of India
 (c) A Resident of India (d) All of these [1]
16. Given below are two statements, one labeled as Assertion(A) and the other labeled as Reason (R):
Assertion (A): Commerce embraces all those activities, which are necessary for maintaining a free flow of goods and services.
Reason (R): Commerce is said to consist of activities of removing the hindrances of persons, Place, time, risk, finance and information in the process of exchange of goods and services.
 In the context of the above two statements, which of the following is correct?
 (a) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
 (b) Both (A) and (R) are true and (R) is the correct explanation of (A)
 (c) Both (A) and (R) are false.
 (d) (A) is false, but (R) is true. [1]
17. Given below are two statements:
Statement I: When two business organizations agree to join together for a common purpose and mutual benefit, it gives rise to a joint venture.
Statement II: A joint venture may also be the result of an agreement between two business organizations in different countries.
 Choose the correct option from the following:
 (a) Statement I is correct and II is wrong
 (b) Statement II is correct and I is wrong
 (c) Both the statements are correct
 (d) Both the statements are incorrect [1]
18. 'ATM speeds up Withdrawal of Money'. An ATM is an example of ____
 (a) B2B Commerce (b) B2C Commerce
 (c) C2C Commerce (d) None of these [1]
19. Which of the following is not a type of Postal Service?
 (a) Registered Post (b) Speed Post
 (c) Radio Paging (d) None of these [1]
20. Which of the following is a limitation of a Government Company?
 (a) It evades constitutional responsibility
 (b) It does not enjoy much operational flexibility
 (c) It is unable to take advantage of business opportunities
 (d) None of these [1]
21. Aman started a small business of manufacturing sanitizers few months back and within a very short span of time, his business gained popularity and created a market standing for itself. As a result, Aman feels a great amount of self satisfaction, whenever he is given sole credit for the success of his business.
 (a) Identify and explain the merit of sole proprietorship being highlighted in the above lines.
 (b) Explain two other merits of sole proprietorship briefly. [3]

22. How did Rise of Intermediaries promote Trade and Commerce during Ancient Times?
Give any three points. [3]
23. What do you mean by Public Private Partnership? Give two examples.
State any two features of PPP model. [3]
24. Explain the three types of business services briefly. [3]

OR

Explain the following briefly:

- (i) Health Insurance
- (ii) Fire Insurance
- (iii) Marine insurance

25. The Government functions through one of the most traditional and suitable form of Public Sector Enterprise where National security is concerned.
(i) Identify the public sector enterprise discussed above and give two examples.
(ii) Explain any three features of the same identified in (i) above. [4]
26. Differentiate between Private Ltd. Company and Public Ltd. Company on the basis of the following: (Columnar presentation is required)
(i) Minimum and Maximum Number of members
(ii) Minimum Number of Directors
(iii) Commencement of Business
(iv) Transfer of shares [4]

OR

A Public Limited Company can raise the required funds from the public by means of issue of securities (shares and debentures etc.) under the Capital Subscription stage.

Explain in detail, the first two steps to be followed by a Public Limited Company to raise funds from public.

27. Rekha purchased an insurance policy for her Laptop. She was adequately compensated by the Insurance Company for the Laptop, when it was stolen a week after its purchase. Later on, the Laptop was recovered from one of the domestic help by the police. Rekha was then denied the possession of the Laptop and it was handed over to the Insurance Company by the Police. Identify the Principle of insurance applicable in the above mentioned case and explain the same in detail. [4]
28. Electronic mode of doing business, or e-Business is gaining popularity because it offers various benefits to the business community and also to the customers.
Explain any four benefits of e-Business, in detail, in context with the above statement. [4]
29. The term 'Business Risk' refers to the possibility of inadequate profits or even losses due to unexpected events. Explain the nature of Business Risks that can be understood in terms of their peculiar characteristics. [4]
30. Differentiate between Traditional Business and e-Business on the basis of the following points:
(i) Location Requirements
(ii) Operating Costs
(iii) Nature of control with the suppliers and the customers
(iv) Shape of the organizational structure [4]

31. Co-Operative Societies are the only form of business organizations established with service motive. There are different types of co-operative societies. Each society is established with a specific purpose. Identify and Explain briefly, the Type of Societies from the following:
- (a) A Society formed to protect the members from the exploitation of lenders.
 - (b) A society formed to protect the interest of Consumers.
 - (c) A Society formed to protect the interest of Farmers.
 - (d) A Society formed to solve the housing problems of the members.

[6]

OR

‘Selection of an appropriate form of business organisation can be made after taking various factors into considerations.’

Do you agree with the given statement? If yes, Explain the important factors determining the choice of form of business organisation briefly, in support of your answer. (Any 6 points)

32. Life Insurance Corporation of India (LIC) is a household name because millions of people are its policy holders. It offers a number of life insurance policies to meet the requirements of children, youth, elders, women, professionals etc. LIC was established by the enactment of LIC Act, 1956 by the parliament. The Act defines its powers and functions, rules and regulations governing its employees and its relationships with government departments.
- (i) How will you classify LIC as a form of Public Sector Enterprise?
 - (ii) Name any two other public sector enterprises of the same form identified in (i), above.
 - (iii) Explain four merits of the form of public sector enterprise identified in (i), above.

[6]

33. Recognising the potential in enhancing quality of life and to facilitate India’s vision of becoming IT super power by the year 2025, new Telecom Policy Framework 1999 and Broadband Policy 2004 were developed by the government of India through which the government intends to provide both universal services to all uncovered areas and high level services for meeting the needs of the country’s economy.

Explain in detail, the utility of different types of Telecom Services in context with the above paragraph. (Any 4 Types)

[6]

34. ‘In order to appreciate how Business activity is different from other activities in society, it is necessary to understand the nature of business or its fundamental character in terms of its distinguishing characteristics.’

Explain in detail, the Characteristics of Business. (Any 6 points)

[6]



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Economics
Maximum Marks - 80

General Instructions

- i. This Question Paper contains two parts:
 - Part A - Statistics (40 marks)
 - Part B - Micro Economics (40 marks)
- ii. Question No. 1 - 10 and 18-27 are very short answer questions carrying 1 mark each. They are required to be answered in one word or one sentence each.
- iii. Question No. 11-12 and 28-29 are short answer questions carrying 3 marks each. Answers to them should not normally exceed 60 - 80 words each.
- iv. Question No. 13-15 and 30-32 are short answer questions carrying 4 marks each. Answers to them should not normally exceed 80 - 100 words each.
- v. Question No. 16-17 and 33-34 are long answer questions carrying 6 marks each. Answers to them should not normally exceed 100-150 words each.

SECTION A - STATISTICS

1. Read the following statements carefully.

Statement 1: Secondary data is collected by someone else and used by the investigator.

Statement 2 : Secondary data is more reliable than primary data.

In the light of the given statements choose the correct alternative from the following. Alternatives :

- (a) Statement 1 is true and statement 2 is false.
- (b) Statement 1 is false and statement 2 is true.
- (c) Both statements 1 and 2 are true.
- (d) Both statements 1 and 2 are false.

[1]

2. Choose the correct alternative:

Which one of the following is not a kind of statistical series?

- (a) individual (b) signed (c) discrete (d) continuous.

[1]

3. Which of the following statements is not an example of statistics?

- (a) Birth rate in India is 18 per thousand as compared to 8 per thousand in the US.
- (b) Ramesh has a rs100 note in his pocket.
- (c) Over the last 10 years India has won 60 test matches in cricket and lost 50.
- (d) Average pocket allowance of the students of class 11 is rupees 500 per month.

[1]

4. Identify the correct sequence of alternatives given in Column II by matching them with respective items in Column I. [1]

Column I	Column II
A. Table B. Spatial classification C. Footnotes D. Manifold table	(i) Given for class clarification of the reader. (ii) Actual presentation of data in the form of rows and columns. (iii) Shows more than three characteristics of the data. (iv) Location becomes the classifying variable.

Alternatives

- (a) A-(iv),B-(iii),C-(i),D-(ii)
 (b) A-(iii),B-(iv),C-(i),D-(ii)
 (c) A-(ii),B-(iv),C-(i),D-(iii)
 (d) A-(iv),B-(ii),C-(i), D-(iii)
5. From the given data calculate the number of workers earning more than rs160. [1]

Wages(rs)	140-150	150-160	160-170	170-180	180-190	190-200
Number of workers	5	10	20	9	6	2

- (a) 47 (b) 17. (c) 37. (d) 52
6. Which of the following is a merit of a good questionnaire? [1]
- (a) Difficulty (b) less number of questions
 (c) Not in proper order (d) Invalid questions.

7. Read the following statements, Assertion (A) and Reason (R). Choose one of the correct alternatives given below: [1]

Assertion (A): In multiple bar diagrams two or more sets of data are simultaneously shown.

Reason (R): Percentage bar diagrams are used generally when the values are of high magnitude.

Alternatives:

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
 (b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
 (c) Assertion (A) is true but Reason (R) is false.
 (d) Assertion (A) is false but Reason (R) is true.

OR

Read the following statements carefully.

Statement 1: The breadth of the bar changes in case of bar diagrams.

Statement 2: Bars are also called rows.

In the light of the given statements choose the correct alternative from the following.

Alternatives :

- (a) Statement 1 is true and statement 2 is false.
 (b) Statement 1 is false and statement 2 is true.
 (c) Both statements 1 and 2 are true.
 (d) Both statements 1 and 2 are false. [1]

8. Assumed mean is taken in which method?

(a) Direct method.

(b) Step deviation method.

(c) Karl Pearson's method.

(d) Spearman's method.

[1]

9. Arithmetic mean of a series is 15 and if 5 is added in all the items of the series, the new arithmetic mean will be

(a) 5

(b) 20

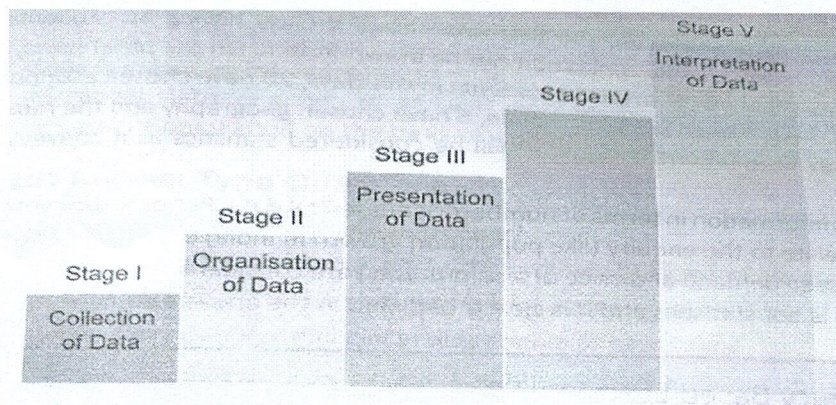
(c) 18

(d) 10.

[1]

10. Answer the following question on the basis of the picture given below:

[1]



Stage IV of statistical study is known as_____

(a) Layering of data.

(b) Analysis of data .

(c) Classification of data.

(d) Layout of data.

11. "Statistics is widely used in all sciences at the same time it suffers from various limitations."Defend or refute the statement and give reasons in support of your answer.

[3]

12. (i) Differentiate between census method and sampling method.

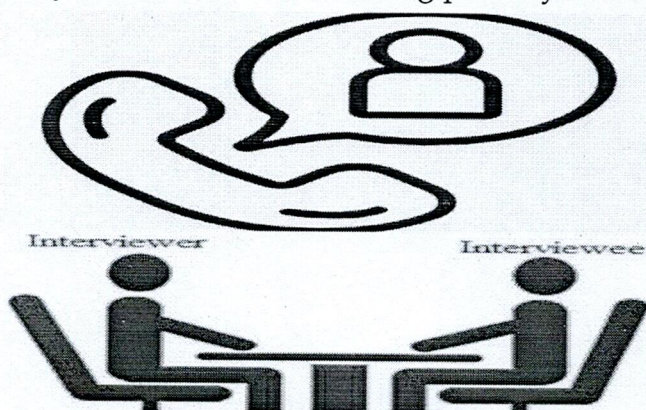
[3]

OR

(ii) The arithmetic mean of the following series is 18 , find out the missing frequency.

Class Interval	11-13	13-15	15-17	17-19	19-21	21-23	23-25
Frequency	3	6	9	13	?	5	4

13. (i) Identify the methods of collecting primary data from the following pictures.



(ii) Explain the merits of any one of the methods.

[1+3]

14. An economic survey revealed the 30 families in a town incur following expenditure in a day (rupees)

11	12	14	16	16	17	18	18	20	20	20	21	21	22	22
23	23	24	25	25	26	27	28	28	31	32	32	33	36	38

- (i) Convert these data in the form of a frequency distribution, using the following class intervals. 10-14, 15-19, 20-24, 25-29, 30-34 and 35-39

- (ii) How many families spend more than 29 rupees a day?

[3+1]

15. (i) Draw a histogram from the following data.

[4]

Weekly Wages	Number of workers
10-15	4
15-20	16
20-25	24
25-30	32
30-40	40
40-60	48

OR

- (ii) Following data relate to the marks secured by students in their statistics paper. Graph these data in the form of less than ogive.

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No of students	4	6	10	10	25	22	18	5

16. (i) The taste of 500 people of a society for different type of food was recorded as follows :

Type of food	North Indian	South Indian	Chinese	Italian	Mexican
Number of people	150	100	125	75	50

Draw a pie diagram to represent the above data.

[4]

- (ii) State whether the following statement is true or false with reason:

In case of more than Ogive the more than cumulative frequencies are plotted against the upper limit of the class intervals.

[2]

OR

- (iii) Total strength of students admitted in a senior secondary school in the year 2018 is 500 in the three streams, Arts, Science and Commerce. There were 100 boys in Arts, 120 girls in Science and 80 boys in Commerce. 40 boys in Arts stream are from rural area, 30 girls of Science stream are from urban area. 35 girls in Commerce are from rural area and 25 girls are from urban area. 30 boys in Science and 20 boys in Commerce are from rural area. 10 girls in Arts are from urban area, 60 boys in Science are from urban area and 40 girls in Arts are from rural areas. Tabulate the above information in a suitable schedule with the help of flowchart.

[6]

17. (i) Find out the arithmetic mean from the following data: [4]

Marks(less than)	5	10	15	20	25	30
No of students	10	23	30	54	69	80

- (ii) The mean monthly salary paid to 77 employees in a company was rs 78. The mean salary of 32 of them was rs 45 and of the other 25 was rs 82. What was the mean salary of the remaining? [2]

SECTION -B MICROECONOMICS

18. In the context of rising prices, following statements are made by two people:

Udit : Prices in the economy are continuously rising.

Shivam: The government should take reasonable steps to control rising prices.

Identify the statements as positive statement and normative statement.

(a) Udit: Positive ,Shivam :Normative.

(b) Udit: Normative ,Shivam: Positive.

(c) Both are positive statements.

(d) Both are normative statements. [1]

19. If there is unemployment in the economy then we would be producing ____ the PPC.

(a) Below (b) Above (c) On (d) None of the above. [1]

OR

The fundamental economic problem being faced is

(a) Unlimited human wants .

(b) Limited wants and unlimited resources .

(c) Unlimited wants and scarcity of resources.

(d) Limited wants and limited resources.

20. Read the following statements Assertion (A) and Reason (R). Choose one of the correct alternatives given below: (1)

Assertion (A): The marginal rate of transformation (MRT) measures the opportunity cost of producing one additional unit of a good.

Reason (R): MRT reflects the slope of Production Possibility Curve and the trade off between the goods.

Alternatives:

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

(c) Assertion (A) is true but Reason (R) is false.

(d) Assertion (A) is false but Reason (R) is true.

21. Which law states that : 'When a consumer consumes more and more units of a product the utility derived from each additional unit decreases'?
- (a) Law of equimarginal utility . (b) Law of ordinal utility .
(c) Law of cardinal utility . (d) Law of diminishing marginal utility. [1]
22. There is a sudden change in climatic conditions resulting in hot weather .Assuming no change in the price of the cold drinks it will lead to :
- (a) Upward movement along the same market demand curve .
(b) Downward movement along the same market demand curve .
(c) Rightward shift in the market demand curve.
(d) Leftward shift in the market demand curve. [1]
23. From the set of statements given in column I and column II choose the correct pair of statements:

Column I	Column II
(A) Substitute Goods	(i) An increase in price of substitute leads to a decrease in the demand for given commodity.
(B) Complementary goods	(ii) An increase in a price of complementary good leads to an increase in the demand for given commodity.
(C)Normal Goods	(iii) Goods whose demand does not change with an increase in income.
(D) Inferior Goods	(iv) Goods whose demand decreases with an increase in income.

Alternatives:

- (a) A-(i). (b) B-(ii). (c) C-(iii). (d) D-(iv) [1]
24. The demand function of a product X is given as $D_x = 20 - 3 P_x$,where P_x stands for price .If an individual Y has a demand of 8 units,then market price of the product is
- (a) rs 4 . (b) rs 5 . (c) rs 3. (d) rs 4.5. [1]
25. If the marginal rate of substitution is constant throughout, the indifference curve will be :
- (a) Parallel to the x-axis. (b) Downward sloping concave .
(c) Downward sloping convex . (d) Downward sloping straight line. [1]
26. Read the following statements carefully.
- Statement 1:** According to Ordinal Utility Approach, utility can be numerically estimated, which a person derives from consumption of goods and services.
- Statement 2:** Utility is subjective and which varies from person to person.
- In the light of the given statements choose the correct alternative from the following. Alternatives :
- (a) Statement 1 is true and statement 2 is false.
(b) Statement 1 is false and statement 2 is true.
(c) Both statements 1 and 2 are true.
(d) Both statements 1 and 2 or false. [1]

27. Total utility is _____ at the point of satiety .
 (a) Minimum. (b) Maximum (c) Zero. (d) None of these. [1]
28. Government of India has recently launched 'Clean India Mission ' (Swachh Bharat Mission). Discuss its impact on the production possibility curve of the economy(with diagram). [3]
29. (i)" A fall in income will have the same effect on demand curve for the given commodity"-
 Defend or refute. [3]

OR

- (ii) Differentiate between budget line and budget set
30. "Indifference curves are downward sloping and convex to the origin" -Justify the statement. [4]
31. State with reasons whether the following statements are true or false: [2+2]
- (i) Due to fall in cost of making bicycles, its price has reduced. . It will shift the demand curve of bicycles towards right.
- (ii) Size and composition of population affect the demand for an individual.
32. (i) Calculate MRT and draw the production possibilities curve with the help of the following data. Comment on the shape of PPC. (1+2+1)

Good X(units)	0	1	2	3	4
Good Y(units)	20	18	14	8	0

OR

- (ii) Differentiate between microeconomics and macroeconomics. [4]
33. "Petrol and diesel prices were cut by Rs 2 per litre each as international oil prices slumped to a 5 year low. This is the eighth straight reduction in petrol prices since August and forth in diesel since October. New rates will be affected midnight tonight, Indian oil corporation, the nation's largest fuel retailer announced here. In Delhi ,petrol will cost Rs. 61.33 a litre, the lowest in 44 months ,as compared to current price of rs63.33. The price has been cut by Rs 2.09 a litre in Mumbai to Rs 68.86. Rates differ from state to state because of varied rates of local sales tax or VAT.
- (i) Change in price of substitute goods will lead to a _____ in the demand curve. [1]
- (a) rotation (b) Shift (c) movement (d) none of these
- (ii) Read the following statement carefully.
- Statement 1:** Demand curve for normal goods is downward sloping.
- Statement 2 :** Increase in the price of bread will increase the demand for butter.
- In the light of the given statements choose the correct alternative from the following. Alternatives :
- (a) Statement 1 is true and statement 2 is false.
- (b) Statement 1 is false and statement 2 is true.
- (c) Both statements 1 and 2 are true.
- (d) Both statements 1 and 2 are false. [1]
- (iii) Use a diagram and economic theory to analyse the impact of this incident on the demand for cars in India. [4]

34. (i) Suppose a consumer has only Rs.24 with him to spend on two commodities i.e. X and Y. Further, also assume that the price of each unit of good X is Rs.2 and the price of each unit of good Y is Rs.3. The marginal utility schedule of this example is given below. [4]

Units	MU _x	MU _y
1	20	24
2	18	21
3	16	18
4	14	15
5	12	12
6	10	9

- (ii) Why MRS diminishes ? [2]

OR

- (iii) "Law of diminishing marginal utility will operate even if consumption takes place in intervals" defend or refute. [2]
- (iv) A consumer consumes only two goods X and Y ,both priced at rs3 per unit. If the consumer choses a combination of these two goods with Marginal Rate of Substitution equal to 3 ,is the consumer in equilibrium ?Give reasons what will a rational consumer do in this situation to reach the equilibrium? Explain. [4]
-



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - History
Maximum Marks - 80

General Instructions:

- i. Question paper comprises five Sections - A, B, C, D and E. There are 34 questions in the question paper. All questions are compulsory.
- ii. Section A - Question 1 to 21 are MCQs of 1 mark each.
- iii. Section B - Question no. 22 to 27 are Short Answer Type Questions, carrying 3 marks each. Answer to each question should not exceed 60-80 words.
- iv. Section C - Question no 28 to 30 are Long Answer Type Questions, carrying 8 marks each. Answer to each question should not exceed 300-350 words.
- v. Section D - Question no.31 to 33 are Source based questions - with three sub questions - and are of 4 marks each.
- v. Section-E - Question no. 34 is Map based, carrying 5 marks that includes the identification and location of significant test items. Attach the map with the answer book.
- vi. There is no overall choice in the question paper. However, an internal choice has been provided in few questions. Only one of the choices in such questions have to be attempted.
- vii. In addition to this, separate instructions are given with each section and question, wherever necessary.

SECTION A

1. Who founded the Mongol Empire?
 - a) Timur
 - b) Chenghis Khan
 - c) Kublai Khan
 - d) Hulagu
2. Which city was destroyed by the volcanic eruption of 79 CE?
 - a) Milan
 - b) Pompeii
 - c) Carthage
 - d) Athens
3. Uruk is historically significant because it was:
 - a) The first city to use bronze extensively
 - b) The largest city of early Mesopotamia and associated with the legend of Gilgamesh
 - c) The capital of the Neo-Babylonian Empire
 - d) Famous for the Hanging Garden
4. The Mongols lived primarily in which type of environment?
 - a) Desert
 - b) Mountain
 - c) Steppe grasslands
 - d) River valleys

5. Roman aqueducts were mainly used for:
 - a) Supplying water
 - b) Defense
 - c) Religious rituals
 - d) Storing grain
6. The Roman province of Gaul roughly corresponds to modern:
 - a) Spain
 - b) Germany
 - c) France
 - d) Turkey
7. Which of the following best describes a ziggurat in Mesopotamia?
 - a) A royal palace
 - b) A stepped temple tower
 - c) A market place
 - d) A city wall
8. Which Mesopotamian city was a major trading center where routes connected to Turkey, Syria, and Iran?
 - a) Uruk
 - b) Mari
 - c) Ur
 - d) Babylon
9. What was the traditional dwelling of the Mongols called?
 - a) Pagoda
 - b) Yurt (Ger)
 - c) Igloo
 - d) Hut
10. Which animal was most essential to Mongol life?
 - a) Sheep
 - b) Horse
 - c) Camel
 - d) Yak
11. In Mesopotamian legends, which goddess was regarded as the goddess of love and war, and was especially worshipped in the city of Uruk?
 - a) Ishtar
 - b) Inanna
 - c) Nanna (Sin)
 - d) Marduk
12. Which ancient script was used by the Mesopotamians for writing on clay tablets?
 - a) Hieroglyphics
 - b) Cuneiform
 - c) Brahmi
 - d) Phoenician

13. Christianity became the official religion of Rome under:
- Augustus
 - Constantine
 - Theodosius
 - Trajan
14. Who declared Temujin as Genghis Khan ?
- Chenghis Khan Himself
 - Assembly of elders
 - Assembly of the Mongol tribes
 - Ogedei Khan
15. Which group of people worked on the large Roman estates called latifundia?
- Nobles
 - Soldiers
 - Slaves
 - Senators
16. The Mongols encouraged which policy towards religion?
- Only Islam was allowed
 - Only Buddhism was allowed
 - Religious tolerance
 - Christianity was made compulsory
17. The Eastern Roman Empire was later called the:
- Byzantine Empire
 - Ottoman Empire
 - Holy Roman Empire
 - Macedonian Empire
18. Which Roman emperor consolidated the empire and established the Principate, marking the beginning of the imperial system?
- Julius Caesar
 - Augustus
 - Nero
 - Trajan
19. Mari, an important city in Mesopotamia, is located on the banks of which river?
- Tigris
 - Euphrates
 - Nile
 - Indus
20. **Assertion (A):** The earliest known cities emerged in Mesopotamia around 3000 BCE.
Reason (R): Surplus agricultural production encouraged urban growth.
Options:
- Both A and R are true, and R is the correct explanation of A.
 - Both A and R are true, but R is not the correct explanation of A.
 - A is true, R is false.
 - A is false, R is true.

21. **Assertion (A):** The Mongol Empire ensured safe trade along the Silk Road.
Reason (R): The period of stability under Mongol rule is called *Pax Mongolica*.
 a) Both A and R are true, and R is the correct explanation of A.
 b) Both A and R are true, but R is not the correct explanation of A.
 c) A is true, R is false.
 d) A is false, R is true.

SECTION B

22. Explain the importance of water transport in ancient world sitting examples from Mesopotamia.
23. Explain the importance of urban centres of the Roman Empire
24. Explain the millitary techniques of Genghis khan
25. What do you know about the religions and faith of Roman Empire?
26. How did ziggurats become a centre of social economic and political life of mesopotamia
27. What do you understand about Yasa and Yam?

SECTION C

28. Explain the uses of writing in ancient civilisations.
29. Compare and contrast the view points of Mongols of that with Europeans about Chenghis Khan
30. Explain the society and culture of the Roman Empire.

SECTION D

31. Read the source given below and answer the questions that follow.

"The Empire had an extensive network of roads connecting different provinces. The law was uniform across the empire, and local governors were responsible for administration and tax collection in their regions. The emperor held supreme power over both the army and the administration. They built large amphitheatres and public baths in their cities. Entertainment and leisure were considered important for citizens. Gladiatorial games and chariot races were organized to keep the public engaged and loyal to the state."

- a) Identify the empire mentioned in the source. [1]
 b) Name one form of entertainment mentioned in the source. [1]
 c) What were the duties of the local governors [2]

32. Read the source given below and answer the questions that follow.

Ghazan Khan's Speech

"I am not on the side of the Persian peasantry. If there is a purpose in pillaging them all, there is no one with more power to do this than I. Let us rob them together. But if you wish to be certain of collecting grain and food for your tables in the future, I must be harsh with you. You must be taught reason. If you insult the peasantry, take their oxen and seed and trample their crops into the ground, what will you do in the future? ... The obedient peasantry must be distinguished from the peasantry who are rebels..."

- a) Identify the ruler who gave this speech. [1]
- b) Name the group of people that Ghazan Khan was addressing in the speech. [1]
- c) Explain the conflict of interests between pastoralists and peasants as highlighted in the speech. [2]

33. Read the source given below and answer the questions that follow.

The Warka Head

This woman's head was sculpted in white marble at Uruk before 3000 BCE. The eyes and eyebrow 1 would probably have taken lapis lazuli (blue) and shell (white) and bitumen (black) inlays, respectively. There is a groove along the top of the head, perhaps for an ornament. This is a world-famous piece of sculpture, admired for the delicate modelling of the woman's mouth, chin and cheeks. And it was modelled in a hard stone that would have been imported from a distance.

- a) Where was the head found from? [1]
- b) What's the assumed time period of the warka head? [1]
- c) Why the warka head is admired worldwide? [2]

SECTION E

34. (A) Identify and mark the following (a) Persia (b) Hispania
- (B) Locate and label two capitals of Roman Empire in the late antiquity. (As (i) and (ii))
- (iii) Capital of the Mongol Empire
-



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Political Science
Maximum Marks-80

General Instructions:

- I. All questions are compulsory.
- II. Question numbers 1-12 are multiple choice questions of one mark each.
- III. Question numbers 13-18 are of 2 marks each. Answers to these questions should not exceed 50 words each.
- IV. Question numbers 19-23 are of 4 marks each.
- V. Question numbers 24-27 are of 6 marks each.
- VI. Question numbers 28-30 are passage, cartoon and map based questions. Answer accordingly.

SECTION A – [1 Mark each]

1. In a span of across 2 years, 11 months and 18 days, the constituent assembly met for how many days?
(a) 163 (b) 166 (c) 168 (d) 116
2. The writ issued to a public authority to perform its legal duty is:
(a) Certiorari (b) Quo Warranto (c) Mandamus (d) Habeas Corpus
3. In which Part of the Constitution are the Directive Principles of State Policy found?
(a) Part V (b) Part IVA (c) Part IV (d) Part III
4. In Political Theory, "Freedom" primarily means:
(a) Absence of constraints
(b) Absence of domination
(c) Presence of authority
(d) Unlimited choice
5. Which of the following is a justified restriction on individual liberty?
(a) Censorship of political criticism
(b) Preventing harm to others
(c) Forcing uniform beliefs
(d) Suppressing peaceful protests
6. Which of the following is NOT a Fundamental Duty?
(a) Respect the Constitution and National Flag
(b) Defend the country
(c) Promote harmony among citizens
(d) Right to constitutional remedies

7. The difference between DPSPs and Fundamental Rights is that:
 - (a) DPSPs are enforceable in court
 - (b) Fundamental Rights are moral guidelines
 - (c) DPSPs are non-justiciable
 - (d) DPSPs are part of Part III of the constitution
8. Which of the following best defines equality in Political Theory?
 - (a) Treating everyone identically in all situations
 - (b) Ensuring everyone has equal opportunities
 - (c) Removing all differences between people
 - (d) Giving more rights to the disadvantaged
9. Which of these is an example of political equality?
 - (a) Equal voting rights for all adults
 - (b) Equal wages for equal work
 - (c) Equal access to schools
 - (d) Abolition of untouchability
10. What is the current strength of the members in Lok Sabha at present?

(a) 542	(b) 545	(c) 543	(d) 546
---------	---------	---------	---------
11. In which year was the voting right reduced from 21 to 18 years through amendment?

(a) 1986	(b) 1984	(c) 1991	(d) 1989
----------	----------	----------	----------
12. Who is the current Chief Election Commissioner of India?

(a) Sukumar Sen	(b) M.S.Gill
(c) Gyanesh Kumar	(d) Rajiv Kumar

SECTION B – [2 Marks each]

13. What do you mean by Swaraj?
14. Throw the light upon how do you look upon the constraints for freedom of individuals?
15. What was the SaptaKranti , centric to Lohia's ideal of socialism ?
16. What was the composition of the Constituent assembly ?
17. Why did DR. Ambedkar call Article 32 as the 'heart and soul of the constitution'?
18. How is the Proportional Representation system of election followed in Israel ?

SECTION C – [4 Marks question]

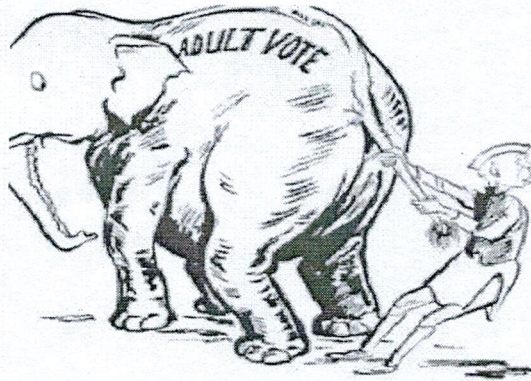
19. State the main points of 'Objectives Resolution' moved by Nehru in 1946?
20. Which of the Fundamental Rights in your opinion is the most important? Summarize it's provisions and give arguments for the same?
21. What is the difference between the system of reservation of constituencies and the system of separate electorate? Why did the constitution makers reject the latter ?

22. What is the 'harm principle'? Differentiate between the negative and positive conception of liberty?

23. What is Feminism? Why were the liberals proponent of the 'principle of competition'?

SECTION E [Source based 4 marks]

24. (i) What does the elephant in the cartoon represent? [1]
(ii) Why was Universal Adult Franchise considered a bold experiment in India at the time of independence? [1]
(iii) What challenges did India face in implementing Universal Adult Franchise, and how did this strengthen democracy? [2]



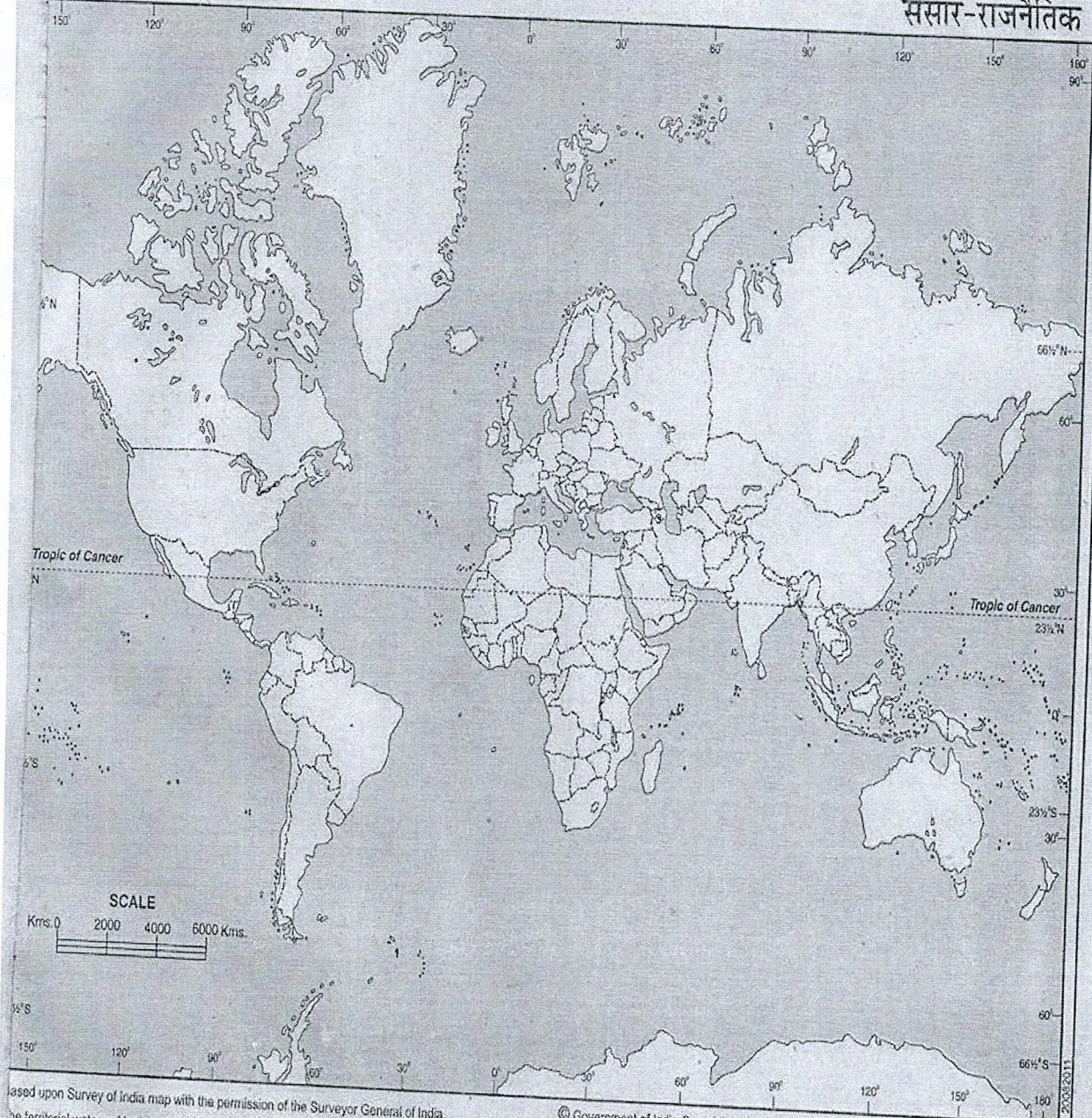
25. Read the following situations. Which Fundamental Right is being used or violated in each case and how?
- (a) Overweight male cabin crew are allowed to get promotion in the national airlines but their women colleagues who gain weight are penalised.
 - (b) A director makes a documentary film that criticises the policies of the government.
 - (c) People displaced by a big dam take out a rally demanding rehabilitation.
 - (d) Andhra society runs Telugu medium schools outside Andhra Pradesh.
26. In the map provided mark the countries as per their information given below -:
- i. The country from which India adopted Fundamental Rights
 - ii. The country from which FPTP system is taken
 - iii. The country from which principles of liberty , equality and fraternity was taken
 - iv. The country from where DPSP is taken.

SECTION E – [6 marks]

27. State the functions of a Constitution?
28. Distinguish between the Fundamental Rights and the Directive Principles of State Policy?
29. What does Article 324[1] state ? State five differences between the FPTP and PR system of election and also mention the PR system's working in Rajya Sabha elections with the formula?
30. What do you know about the three dimensions of Equality?

WORLD - POLITICAL

संसार-राजनैतिक



Based upon Survey of India map with the permission of the Surveyor General of India.

© Government of India Copyright, 2011.

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate baseline.

The External Boundary and coast-line of India shown on this map agree with the Record / Master Copy certified by the Survey of India, Dehra Dun.

File Letter No. T.B. 409/62-A-3/213 Dated 13/3/2003.

Printed by: Prakash Offset Printers

Publishers:-

INDIAN BOOK DEPOT (MAP HOUSE)

2937, Bahadurgarh Road, Delhi-110006.

E-mail: info@ibdmaphouse.com



Delhi-6



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Sociology
Maximum Marks - 80

General Instructions

1. The question paper is divided into four sections.
2. There are 35 questions in all. All questions are compulsory.
3. Section A includes question No. 1-16. These are MCQ type questions. As per the question, there can be one answer.
4. Section B includes question No. 17-25. These are very short answer type questions carrying 2 marks each. Answer to each question should not exceed 30 words.
5. Section C includes question No. 26-32. They are short answer type questions carrying 4 marks each. Answer to each question should not exceed 80 words.
6. Section D includes question No. 33-35. They are long answer type questions carrying 6 marks each. Answer to each question should not exceed 200 words each.
7. Question no. 33 is to be answered with the help of the given graphics. Question no. 35 is to be answered with the help of the given passage.

SECTION - A (1X16=16)

1. **Assertion: (A) :** In the 18th and 19 centuries the tempo of agricultural and manufacturing labour increasingly came to be set by the clock and calendar in a way very different from pre- modern forms of work.
Reason. (R): Prior to the development of industrial capitalism, work rhythms were set by factors such as the period of daylight. The break between tasks and the constraints of deadline or other social duties.
 - a. Both A and R are true and R is the correct explanation of A.
 - b. Both A and R are true but R is not the correct explanation of A.
 - c. A is true but R is false.
 - d. A is false but R is true.
2. Idea of 'social imagination' is associated with---
 - a. James Mill
 - b. Max Weber
 - c. P V Young
 - d. C Wright Mill
3. The study of large scale groups ,organizations or system is called---
 - a. Macro sociology
 - b. Micro sociology
 - c. Common sense knowledge.
 - d. A naturalistic explanation

4. A term referring to the fact that the groups and societies of which we are part " exert a conditioning influence on our behaviour ", called as-----
 - a. Obligations
 - b. Social constraints
 - c. Stereotyping
 - d. Prohibition
5. Which one of the following is NOT the characteristics of a social group?
 - a. Persistent interaction to provide continuity
 - b. A sense of belonging to identity with other members
 - c. An aggregate or combination which lacks structure or organization
 - d. Shared interest
6. A kind of primary group, usually formed between individuals who are either of similar age or in a common professional group---
 - a. Reference group
 - b. Quasi group
 - c. In-group
 - d. Peer group
7. Modes of action which do not conform to norms and values held by most members of a group or society----
 - a. Sanction
 - b. Deviance
 - c. Norms
 - d. Values
8. Social expectations about behavior regarded as appropriate for the members of each sex is----
 - a. Ideology
 - b. Legitimacy
 - c. Gender
 - d. Citizen
9. The belief that a particular political order is just and valid---
 - a. State
 - b. Sovereignty
 - c. Ideology
 - d. Legitimacy
10. **Assertion (A):** Religion can be studied as a separate entity.
Reason (R) : Social forces always and invariably influence religious institutions.
 - a. Both A and R are true and R is the correct explanation of A.
 - b. Both A and R are true but R is not the correct explanation of A.
 - c. A is true but R is false.
 - d. A is false but R is true.
11. It refers to society 's sanction for the establishment of family through procreation---
 - a. Kinship
 - b. Citizen
 - c. Socialism
 - d. Marriage

12. **Assertion (A):** Education is a life long process involving both formal and informal institutions of learning.
- Reason (R):** Children learn customs ,values and norms in the broader way. Often by participating in activities with their adults.
- Both A and R are true and R is the correct explanation of A.
 - Both A and R are true but R is not the correct explanation of A.
 - A is true but R is false.
 - A is false but R is true.
13. This dimension of culture refers to understanding , how we make sense of all the information coming to us from our environment-----
- Normative
 - Cognitive
 - Material
 - Historical
14. It values other cultures for their difference. It's outlook does not seek to evaluate the values and beliefs of other people according to one's own.
- Cosmopolitanism
 - Ethnocentrism
 - Sub- Culture
 - Socialisation
15. Who has stated in his book 'Orality and Literacy' that only 78 out of 3,000 existing languages possess literature —
- Walter Ong
 - Tylor Edward
 - Geertz
 - Pierre Bourdieu
16. **ASSERTION (A):** Sociological studies are often concerned with investigating how literacy can be made relevant to the lives of people whose families have never gone to school.
- REASON (R):** Students of Indian classical music are still discouraged from writing down what they learn rather than carrying it in their memory.
- Both A and R are true and R is the correct explanation of A.
 - Both A and R are true but R is not the correct explanation of A.
 - A is true but R is false.
 - A is false but R is true.

SECTION - B (2X9=18)

17. How Sociology is a progressive science?

OR

Discuss Pluralities of society.

18. What is 'Empirical investigation'?

19. Give two differences between sociology and history.

20. What is informal social control?

21. Define social constraints.

22. Define the term Sanction.

OR

Why do people join groups?

23. What do you understand by 'Stateless society'?

24. Discuss the rules of Exogamy and Endogamy.

25. Explain the term Cosmopolitanism.

OR

What is Ethnocentrism?

SECTION - C (4X7=28)

26. What is the relationship between Sociology and Political Science? Give example.

OR

State the main features of sociology.

27. Discuss the emergence and growth of sociology in India.

28. Why does society need social control. Mention types of social control.

OR

Distinguish between Ascribed status and Achieved status. Also mention different kinds of status. [2+2]

29. Discuss the kind of Rights that exist in your society.

OR

Write an essay on social function of education.

30. What is marriage? Discuss its various forms.

31. Mention elaborate different agencies of socialization.

32. Discuss the cognitive, normative and material dimension of culture.

SECTION - D (6X3=18)

33. Explain types of social groups found in society.

OR

State main functions of Stratification.

34. What do you mean socialization. Discuss the agencies of socialization. [2+4=6]

35. Read the following passage and answer the questions that follow.

Many extraneous factors have affected the traditional life of the religious specialists. The most important of these are the growth of new employment and educational opportunities. In Nasik, after independence the way of life of the priest has been changing fast. Now the sons and daughters are sent to school and are trained for jobs other than traditional ones. Like all places of pilgrimage, Nasik also gave rise to supplementary centres around religious activities. It was a normal routine for a Pilgrim to take home the sacred water of the Godavari in a copper pot. The copper smiths provided these wares. The Pilgrims also bought wares which they took home to be distributed as gifts among their relatives and friends. For long, Nasik was known for its proficient craftsmen in brass, copper, and silver. Since the demand for their wares is intermittent and uncertain. Not all the adult males can be supported by this occupation. Many craftsmen have entered industry and business, both small and large scale.

(Acharya. 1974:399-401.)

1. Differentiate between the sacred and profane. [3]
 2. In Nashik pilgrimage has influenced economy of the place. Explain. [3]
-



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Psychology
Maximum Marks-70

General Instructions:

- i. All questions are compulsory except where internal choice has been given.
 - ii. Question Nos.1-15 in Section A carry 1 mark each.
 - iii. Question Nos. 16-20 in Section B are Very Short Answer Type-I questions carrying 2 marks each. Answer to each question should not exceed 30 words.
 - iv. Question Nos.21-25 in Section C are Short Answer Questions Type-II carrying 3 marks each. Answer to each question should not exceed 60 words.
 - v. Question Nos.26-29 in Section D are Long Answer Type I questions carrying 4 marks each. Answer to each question should not exceed 120 words.
 - vi. Question No. 30-32 in Section E is a Long Answer Type II question carrying 6 marks. Answer to this question should not exceed 200 words.
-

SECTION - A

1. Which of the following is NOT a goal of psychology?
 - a) Understanding
 - b) Predicting
 - c) Controlling
 - d) Manipulating.
2. Ramesh cannot focus on his studies when loud music is playing outside. Which psychological process is directly being affected?
 - a) Sensation
 - b) Attention
 - c) Perception
 - d) Cognition
3. Dr. Supriya has a Medical degree with years of specialized training in the treatment of psychological disorders. Correctly identify her profession from the options given below.
 - a) Clinical Psychologist
 - b) Psychiatrist
 - c) Health Psychologist
 - d) Counselling Psychologist
4. Satya has conducted a research for determining the relationship between the amount of screen time exposure and academic achievement of school students. Which research method will be appropriate in this regard?
 - a) Correlational
 - b) Interview
 - c) Case Study
 - d) Observation

5. A psychological test developed for urban students may contain items that are familiar with the stimuli available in urban setting. Such a test is not suitable for being used for children living in rural or tribal areas. This example explains which aspect of psychological enquiry?
 - a) Psychological measurements are not reliable and valid
 - b) Tools of psychological enquiry are relative in nature
 - c) Psychological enquiry can only be conducted on individuals residing in urban areas
 - d) None of the given options correctly relates to the above example
6. Subh is a highly athletic boy and can play games that involve bodily movements very well. However, he faces so much of difficulty in drawing and writing that he takes a long time even to write one alphabet clearly. This is indicative of his.....
 - a) Good fine motor skills
 - b) Poor fine motor skills
 - c) Poor gross motor skills
 - d) Good gross motor skills
7. According to the Life span perspective, when do development changes occur?
 - a) During infancy and early childhood
 - b) During adolescence and early adulthood
 - c) During middle and late adulthood
 - d) Throughout the entire life span
8. The areas surrounded by others tend to be perceived as figures, explain:
 - a) The principle of surroundness
 - b) The principle of symmetry
 - c) The principle of smallness
 - d) The principle of largeness
9. Erik Erikson was founder of:
 - a) Psychosocial development
 - b) Sociological development
 - c) Psychological development
 - d) Both A & B
10. The minimum amount of stimulation required to be detected by our senses is called:
 - a) Absolute threshold
 - b) Difference threshold
 - c) Sensory adaptation
 - d) Weber's law
11. **Assertion:** People largely differ with respect to psychological characteristics (like intelligence/personality/memory/learning ability) although they share a commonality of belonging to the same species of 'homosapiens'
Reason: We all have inherited the human genetic codes from our parents that provides a distinct blue print and time table for development. However genes do not exist in isolation and development occurs in the context of individual's environment which makes each of us unique.
 - a) Both A and R are true, but R is the correct explanation of A
 - b) Both A and R are true, and R is not the correct explanation of A
 - c) A is true, R is false
 - d) A is false, R is true

12. **Assertion (A):** Delinquency refers to variety of behaviors, ranging from legal offences, to criminal acts e.g.: truancy, stealing etc.

Reason (R): Delinquency is not associated with low parental support, inappropriate discipline and family discord

- a) Both A and R are true, but R is the correct explanation of A
- b) Both A and R are true, and R is not the correct explanation of A
- c) A is true, R is false
- d) A is false, R is true

Case study: A young man who suffered a brain injury in an accident, claimed after coming back from that hospital that his parents have been replaced by their 'duplicates'. They were imposters.

13. Select the statement which appropriately explains the above mentioned case.

- a) The person has suffered damage in some part of the brain but his mind has remained intact
- b) Human mind can exist even without a brain
- c) The man acquired some supernatural powers/abilities after the accident so he is behaving in this manner
- d) None of the explanations correctly explains the case study.

Avneesh has got a research position in the department of Psychology Delhi University?

14. Identify the correct step-wise sequence in for conducting psychological research?

- a) Conceptualization of problem/Data Collection/Drawing Conclusions/Revising Conclusions
- b) Revising Conclusion/Drawing Conclusion/Data Collection/Conceptualization of Problem
- c) Data Collection/Drawing Conclusion/Conceptualization of Problem/Revising Conclusion
- d) Drawing Conclusion/Data Collection/Conceptualization of Problem/Revising Conclusion

15. **Assertion (A):** Adolescence is marked by identity crisis.

Reason (R): Erikson considered adolescence a stage of role confusion vs identity.

- a) Both A and R are true, and R explains A.
- b) Both A and R are true, but R does not explain A.
- c) A is true, R is false.
- d) A is false, R is true.

SECTION -B (2 MARKS)

- 16. Define the term behaviour including its types along with examples.
- 17. Differentiate between naturalistic observation and controlled observation.
- 18. State any two characteristics of adolescence.
- 19. What is the difference between sensation and perception?
- 20. Mention two factors affecting attention.

SECTION - C (3 MARKS)

21. Explain the scope of psychology in three applied fields.
22. Satya is going to study relationship between poverty and unemployment in her locality in her locality after the pandemic. She decided to use experimental method for it. Define experimental method and explain different type of variable.
23. Explain Piaget's concept of egocentrism in children.
24. Describe the role of kinesthetic and vestibular senses in human functioning.
25. Why do illusions occur? Explain with examples.

SECTION D (4 MARKS)

26. Differentiate between experimental method and case study method of enquiry.
27. **Read the case and answer the questions that follow.**
 Supriya is one of your classmates. You have often noticed that in majority of class she plays Sudoku or doodles instead. However, her performance is beyond par level. She tops the class. When asked about this, she answered that it helps her to focus. Although it seems paradoxical, she tells that doing puzzle or doodle helps her to distract from unnecessary things and focus on class work.
 - (i) Identify the attentional process that Supriya is exhibiting? Discuss the process. (2)
 - (ii) What are the characteristics of automatic processing? (2)
28. **Read the case and answer the questions that follow.**
 Rohan is a 15-year-old student who has recently entered adolescence. He often argues with his parents, spends more time with his peer group, and is very conscious about his appearance. At the same time, he is confused about what career path he should choose and sometimes feels uncertain about his identity.

Questions:

 - a) Identify the stage of development Rohan is in according to Erikson. (1)
 - b) Name the psychosocial conflict faced at this stage. (1)
 - c) Explain any two major characteristics of adolescence reflected in the case. (2)
29. Define the term data. Explain the different types of data collected in psychological research with examples

SECTION - E (6 MARKS)

30. Define psychology. Explain briefly the goals and nature of psychology with suitable examples.

OR

What is selective attention? Explain different theories proposed for selective attention.

31. Sheela and her colleagues are studying the moral behaviour of UG College students. Explain in detail the ethical guidelines that the psychologists needs to follow while conducting any Psychological enquiry.
32. 'Development is always embedded in a particular socio-cultural context'. Discuss in detail the contextual view of development as explained by Urie Bronfenbrenner.



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Geography
Maximum Marks-70

General Instructions:

1. This question paper contains 30 questions. All questions are compulsory.
2. This question paper is divided into five sections. Sections-A, B, C, D and E.
3. Section A - Question number 1 to 17 are Multiple Choice type questions carrying 1 mark each.
4. Section B- Question number 18 and 19 are Source based questions carrying 3 marks each.
5. Section C- Question number 20 to 23 are Short Answer type questions carrying 3 marks each.
Answer to these questions shall be written in 80 to 100 words.
6. Section D - Question number 24 to 28 are Long Answer type questions carrying 5 marks each.
Answer to these questions shall be written in 120 to 150 words.
7. Section E- Question number 29 and 30 are Map based questions carrying 5 marks each.
8. There is no overall choice given in the question paper. However, an internal choice has been provided in a few questions in all sections, except Sections A and B.

SECTION- A

1. Match the Column I with Column II and choose the correct option. [1]

Column I

- I. Demography
- II. Philosophy
- III. Anthropology
- IV. Botany

Options:

	I	II	III	IV
(A)	3	4	2	1
(B)	2	4	1	3
(C)	2	3	4	1
(D)	3	1	4	2

Column II

- 1. Phyto Geography
- 2. Population Geography
- 3. Geographical Thoughts
- 4. Cultural Geography

2. Which is the most popular argument regarding the origin of the universe? [1]

- (A) Collision Hypothesis
- (B) Big Bang Theory
- (C) Nebular Hypothesis
- (D) Binary Theory

3. Which one of the following figures represents the age of the earth? [1]

- (A) 4.6 million years
- (B) 4.6 billion years
- (C) 13.7 billion years
- (D) 13.7 trillion years

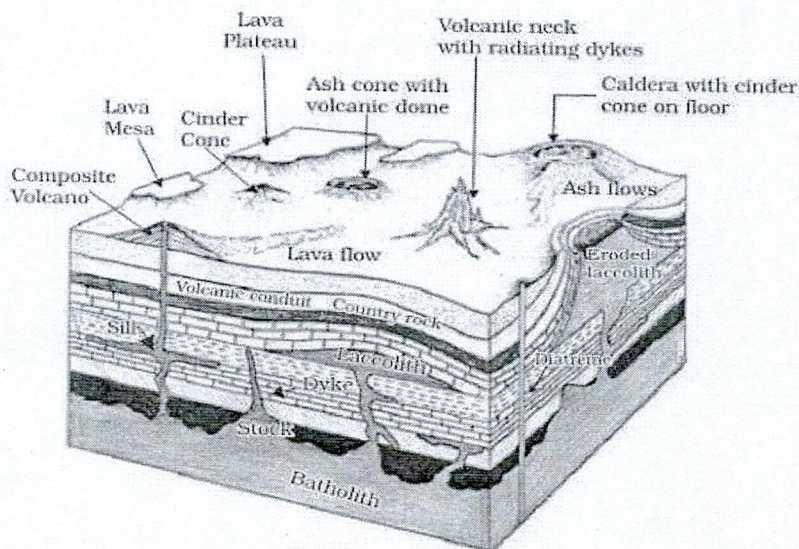
4. Polar fleeing force relates to:

[1]

- (A) Revolution of the Earth
- (B) Rotation of the Earth
- (C) Gravitation
- (D) Tides

5. Observe the given figure and answer the following question:

[1]



Match the Column I with Column II and choose the correct option.

Column I

- I. Laccolith
- II. Caldera
- III. Sill
- IV. Dyke

Column II

- 1. Wall-like structure
- 2. Thick horizontal deposit
- 3. Large dome-shaped
- 4. Collapsed depression

Options:

	I	II	III	IV
(A)	3	4	2	1
(B)	2	3	4	1
(C)	2	4	3	1
(D)	3	1	4	2

6. Assertion (A): Shield volcanoes are not steep.

[1]

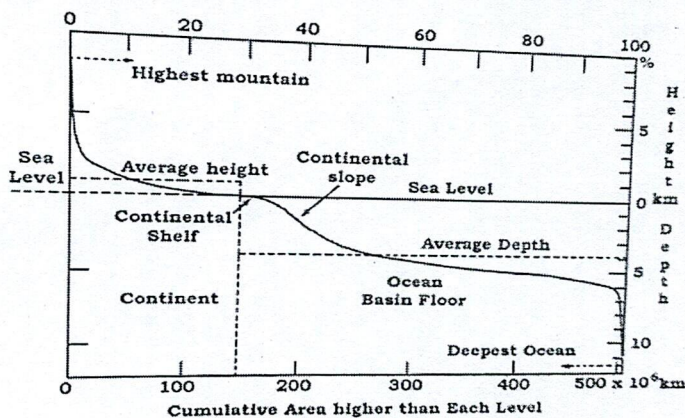
Reason (R): Shield volcanoes are mostly made up of basalt, a type of lava that is very fluid when erupted.

Options:

- (A) Both (A) and (R) are true but (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true and (R) is not the correct explanation of (A).
- (C) (A) is true but (R) is false.
- (D) (A) is false but (R) is true.

7. Observe the given figure and answer the following question:

[1]



Ocean Floor

Which division of the ocean floor form the transition between continental shores and deep-sea basins?

- (A) Continental Margins
- (B) Abyssal Plains
- (C) Mid-Oceanic Ridges
- (D) Submarine Canyons

8. **Assertion (A):** Physical weathering process can cause great damage to rocks.

[1]

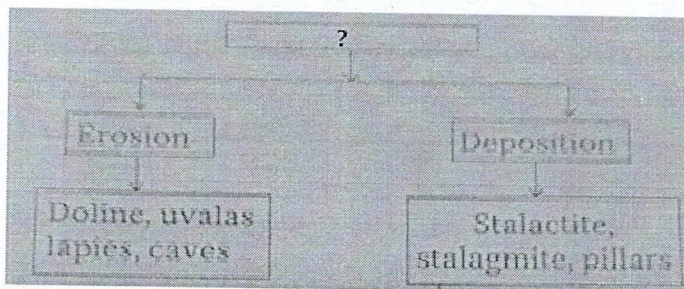
Reason (R): The rocks suffer from continued fatigue due to repetition of contraction and expansion.

Options:

- (A) Both (A) and (R) are true but (R) is the correct explanation of (A).
- (B) Both (A) and (R) are true and (R) is not the correct explanation of (A).
- (C) (A) is true but (R) is false.
- (D) (A) is false but (R) is true.

9. Identify the appropriate option to fill the empty box.

[1]



- (A) Groundwater
- (B) Running Water
- (C) Glacier
- (D) Wave

10. Which of the following is an erosional landform of glacier?

[1]

- (A) Cirque
- (B) Moraine
- (C) Esker
- (D) Outwash Plain

11. Which landform is formed by wind? [1]
(A) Meander
(B) Sinkhole
(C) Esker
(D) Barchan
12. Which one of the following longitudes is the standard meridian for India? [1]
(A) 69°30' E
(B) 75°30' E
(C) 90°30' E
(D) 82°30' E
13. What is the total area of India? [1]
(A) 2.38 million sq. km
(B) 3.38 million sq. km
(C) 3.28 million sq. km
(D) 2.58 million sq. km
14. New alluvial deposits is known as [1]
(A) Bhabar
(B) Khadar
(C) Bhangar
(D) Tarai
15. Which one of the following is not a part of the Meghalaya plateau? [1]
(A) The Kaimur Hills
(B) The Garo Hills
(C) The Khasi Hills
(D) The Jaintia Hills
16. Which one of the following rivers flows in a rift valley? [1]
(A) The Son
(B) The Yamuna
(C) The Narmada
(D) The Luni
17. Which of the following river is called the Dakshin Ganga? [1]
(A) The Mahanadi
(B) The Godavari
(C) The Tapi
(D) The Kaveri

SECTION- B

18. Read the given passage carefully and answer the questions that follow: [1+1+1=3]
All natural earthquakes take place in the lithosphere. The lithosphere refers to the portion of depth up to 200 km from the surface of the earth. An instrument called 'seismograph' records the waves reaching the surface. A curve of earthquake waves recorded on the seismograph. The curve shows three distinct sections each representing different types of wave patterns. Earthquake waves are basically of two types – body waves and surface waves. Body waves are generated due to the release of energy at the focus and move in all directions travelling through the body of the earth. Hence, the name body waves. The body waves interact with the

surface rocks and generate new set of waves called surface waves. These waves move along the surface. The velocity of waves changes as they travel through materials with different densities. The denser the material, the higher is the velocity. Their direction also changes as they reflect or refract when coming across materials with different densities.

(i) Which waves travel through gaseous, liquid and solid materials?

(ii) What are surface waves?

(iii) What is the difference between reflection and refraction?

19. Read the given passage carefully and answer the questions that follow: [1+1+1=3]

The Peninsular drainage system is older than the Himalayan one. This is evident from the broad, largely-graded shallow valleys, and the maturity of the rivers. The Western Ghats running close to the western coast act as the water divide between the major Peninsular rivers, discharging their water in the Bay of Bengal and as small rivulets joining the Arabian Sea. Most of the major Peninsular rivers except Narmada and Tapi flow from west to east. The Chambal, the Sind, the Betwa, the Ken, the Son, originating in the northern part of the Peninsula belong to the Ganga river system. The other major river systems of the Peninsular drainage are – the Mahanadi, the Godavari, the Krishna and the Kaveri. Peninsular rivers are characterised by fixed course, absence of meanders and non-perennial flow of water.

(i) Which two peninsular rivers flow from east to west?

(ii) Which peninsular river forms Dhuandhar waterfall?

(iii) Why does the Kaveri river carry water throughout the year?

SECTION - C

20. Explain the three stages in the evolution of the present atmosphere. [3]

21. How does biological weathering take place? [3]

OR

What is the role of gravity in geomorphic processes? Explain.

22. How are Andaman and Nicobar islands different from Lakshadweep islands? [3]

23. Describe any three drainage patterns formed by the rivers. [3]

OR

Explain the three categories of the drainage basin of India on the basis of the size of the watershed.

SECTION - D

24. What are the major approaches to study geography? Explain. [5]

25. Explain the Continental Drift Theory. [5]

OR

Explain the movement of the Indian Plate.

26. Exogenic geomorphic processes derive their ultimate energy from the sun's heat. Explain. [5]

OR

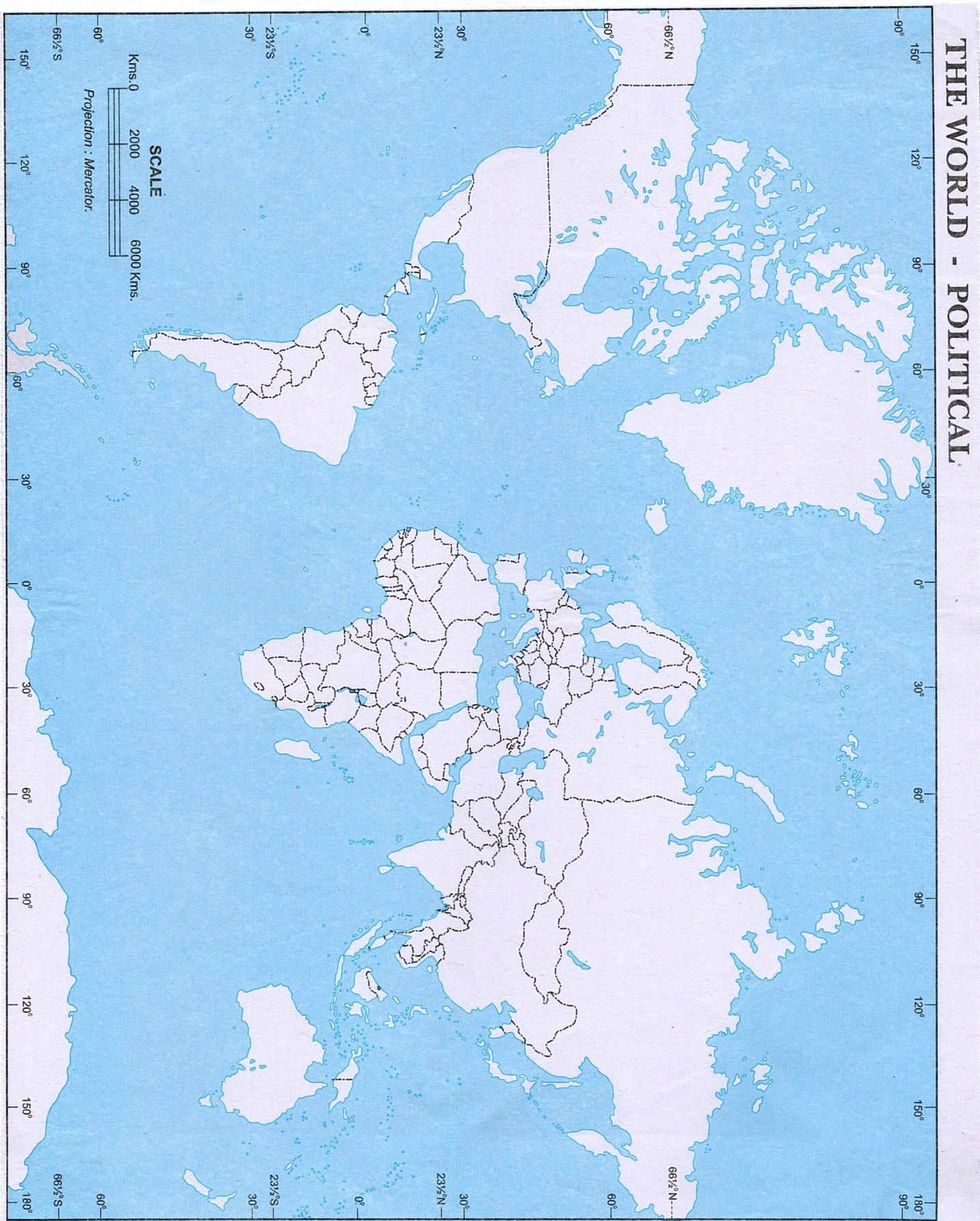
What is the role of climate and time as two important control factors in the formation of soils?

27. 'Floodplain is a major landform of river deposition'. Explain. [5]

28. Explain any five features of the Central Highlands. [5]

SECTION- E

29. Locate and label **any five** of the following geographical features on the Political Outline map of World: [5]
- (A) Arctic Ocean
 - (B) North American Plate
 - (C) Arabian Plate
 - (D) Mongolia
 - (E) France
 - (F) Brazil
 - (G) Nazca Plate
30. Locate and label **any five** of the following geographical features on the Political Outline map of India with appropriate symbols: [5]
- (A) The westernmost longitude of India in degree
 - (B) Aravali Range
 - (C) Nanda Devi Peak
 - (D) Kanniyakumari
 - (E) Gulf of Kachchh
 - (F) Tapi river
 - (G) Palk Strait
-





DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF-YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Physical Education
Maximum Marks - 70

GENERAL INSTRUCTIONS:-

- The question paper consists of 5 sections and 37 Questions.
- Section A consists of questions 1-18 carrying 1 mark each and is multiple choice questions. All questions are compulsory.
- Section B consist of questions 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. Attempt any 5.
- Section C consist of questions 25-30 carrying 3 marks each and are short answer type and should not exceed 100-150 words. Attempt any 5.
- Section D consist of questions 31-33 carrying 4 marks each and are case studies.
- Section E consist of question 34-37 carrying 5 marks each and are long answer types and should not exceed 200-300 words. Attempt any 3.

SECTION-A

- In which year LNCPE got the status of deemed university. (1)
 - 1993
 - 1994
 - 1995
 - None of the above
- _____ is the common passageway of both the Digestive & Respiratory system. (1)
 - Trachea
 - Pharynx
 - Larynx
 - Bronchi
- Explosive Strength is a combination of which motor abilities? (1)
 - Speed + Strength
 - Endurance + Strength
 - Flexibility + Strength
 - None of the above
- In which year IOC has adopted the Olympic Anthem? (1)
 - 1955
 - 1956
 - 1957
 - 1958
- Harvard step test was developed in which year? (1)
 - 1942
 - 1943
 - 1944
 - 1945

6. Which type of capillaries found in the liver, spleen & bone marrow. (1)
- Continuous Capillaries
 - Fenestrated Capillaries
 - Both "A" & "B"
 - Sinusoidal Capillaries / Discontinuous Capillaries
7. TOPS stands for : (1)
- Talented Olympic Player Scheme
 - Talented Olympic Podium Scheme
 - Target Olympic Podium Scheme
 - None of the above
8. For the first time in which year Sit & Reach test was developed ? (1)
- 1952
 - 1962
 - 1972
 - 1982
9. The Olympic torch relay was introduced in _____ at _____ Olympics. (1)
- 1924, Paris
 - 1936, Berlin
 - 1948, London
 - None of the above
10. Trachea is also known as _____. (1)
- Voice Box
 - Larynx
 - Diaphragm
 - Wind Pipe
11. Static strength can be measured by _____. (1)
- Goniometer
 - Stadiometer
 - Dynamometer
 - All of the above
12. Given below are the two statements labelled Assertion (A) and Reason (R). (1)
- Assertion (A):-** Passive Flexibility is the foundation for active Flexibility.
- Reason (R):-** Active Flexibility is always more than Passive Flexibility.
- Both (A) and (R) are True and (R) is the correct explanation of (A).
 - Both (A) and (R) are True, but (R) is the not the correct explanation of (A).
 - (A) is True, but (R) is False.
 - (A) is False, but (R) is True.
13. 35.0-39.9 BMI comes under which type of body category according to WHO. (1)
- Obesity Class-II
 - Obesity Class-I
 - Obesity Class-III
 - Underweight

14. CABPER stands for: (1)
- Central Advisory Board of Physical Education & Research
 - Central Advisory Board of Physical Education & Recreation
 - Central Advisory Board of Physical Education & Repetition
 - None of the above
15. What is the meaning of "Communis" in Olympic Motto. (1)
- Faster
 - Higher
 - Stronger
 - Together
16. Partial curl-up is helpful to measure _____. (1)
- Muscular Strength & Speed of abdominal muscles
 - Muscular Strength & Endurance of abdominal muscles
 - Muscular Strength & Flexibility of abdominal muscles
 - None of the above
17. In which year ancient Olympic Games was stopped? (1)
- 394 CE
 - 494 CE
 - 594 CE
 - 694 CE
18. The study of Joints is known as _____. (1)
- Myology
 - Osteology
 - Cardiology
 - Arthrology

SECTION-B

19. Explain properties of muscles. (2)
20. Define First Aid & write any two objectives of it. (2)
21. Write short note on Wearable gears & Sports equipment in changing trends in sports. (2)
22. Explain the procedure of modified Push-ups. (2)
23. Write any four rules for competitors in ancient Olympic games. (2)
24. Write short note on Fit India movement. (2)

SECTION-C

25. Write short note on IOC & its functions in detail. (3)
26. Explain different types of somatotypes or body type which was given by W.H. Sheldon? (3)
27. Explain any three objectives of Physical education in detail? (3)
28. Explain classification of joints with suitable examples? (3)

29. Define any three of the following:-

(3)

- a. Agility
- b. Reaction time
- c. Body composition
- d. Balance

30. Write short note on any three of the following:-

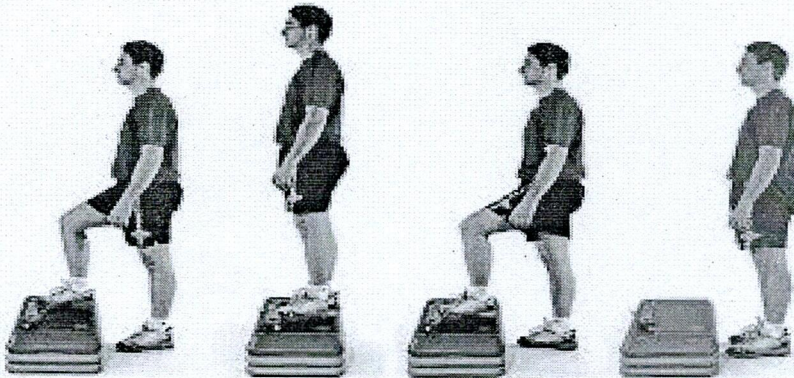
(3)

- a. Olympic Flag
- b. Modern Olympic Awards
- c. Olympic Flame
- d. Olympic Oath

SECTION-D

31. Observe the picture given below and answer the following questions:-

(4)



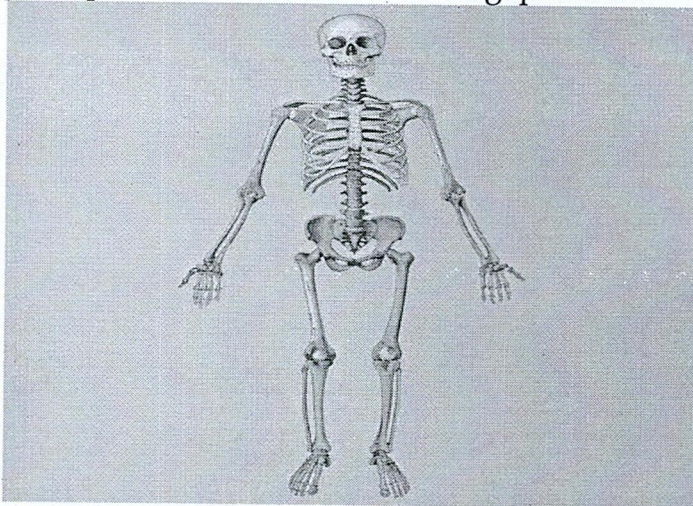
1. The test shown in the above picture is conducted to check the _____ fitness.
 - a. Muscular
 - b. Cardiovascular
 - c. Respiratory
 - d. Skeletal
2. The test shown in the picture is developed by _____.
 - a. Brouha
 - b. Sheldon
 - c. Cooper
 - d. None of the above
3. Subject should have to step up and step down at the rate of _____ steps per minute.
 - a. 45
 - b. 55
 - c. 30
 - d. 35
4. If the fitness index score of a male is 61, then the individual comes under which category of Harvard step test.
 - a. Excellent
 - b. Good
 - c. Average
 - d. Below average

32. When and how did the ancient Olympic Games begin? There is no authentic information or definite fact about their origin, but there are various tales about the origin of these games in ancient Greek stories. Based on different stories answer the following questions. (4)

1. Hercules succeeded in turning the flow of the _____ towards the stables and automatically the stables became clean.
 - a. Nestos River
 - b. Axios River
 - c. Alpheus River
 - d. None of the above
2. Hippodamia was the daughter of king _____.
 - a. Oenomaus
 - b. Zeus
 - c. George I
 - d. George II
3. Some historians hold the view that Greece was divided into small states which were called _____.
 - a. Olympic States
 - b. City States
 - c. Village states
 - d. All of the above
4. Who stopped ancient Olympic games?
 - a. Ancus Marcius
 - b. Servius Tullius
 - c. Alexander
 - d. Theodosius

33. Based on given picture, answer the following questions:-

(4)



1. _____ is the longest bone in human body.
2. Patella is the example of _____ Bones.
3. Carpus & Tarsus are the example of _____.
4. Total number of bones in Appendicular Skeleton is _____.

SECTION-E

34. Write short note on Khelo India programme & explain any six components. (5)
35. Briefly explain the function & structure of Circulatory system & Heart? (5)
36. Explain any ten points of importance of Physical fitness & Health in our life. (5)
37. Briefly explain the importance of Test, Measurement & Evaluation in Sports. (5)
-



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class – XI
Time – 2 Hours

Subject – Painting (049) /Graphics (050)
Maximum Marks - 30

General Instructions:

- Section-A: Attempt all Questions (Each Question will carry 1 Mark)
- Section-B: Attempt all Questions (Each Question will carry 2 Marks)
- Section-C: Attempt any two Questions (Each Question will carry 6 Marks)

SECTION-A

Select the right answer from the given options:

[1x8=8]

1. A. Which of the following is not a site associated with Indus Vally Civilization?

- (a) Lothal (b) Kalibangan (c) Dhola Vira (d) Aryadeep

B. Assertion (A): The Dancing Girl sculpture of Mohenjo-Daro reflects a sense of movement and confidence.

Reason (R): The figure was casted in bronze using the lost-wax technique and shows a naturalistic pose.

- (a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true, R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true

C. The new name of Indus Vally civilization is

- (a) Indus Saraswati civilization (b) Indus Ravi civilization
(c) Indus Ganga civilization (d) Devi Laxmi Saraswati civilization

D. Assertion (A): The Lion Capital of Sarnath pillar was executed during the reign of Ashoka (Mauryan Period) in the 3rd century BC at Sarnath between 242-232 B.C. It is now in the collection of Sarnath Archaeological Museum, Sarnath. It is the finest specimen of Maurya period found in 1904 at Sarnath and was designed by the Emperor Ashoka himself.

Reason (R): It is highly polished red spotted monolithic sandstone 'Lion-Capital' found at Mathura, carved out of 7 feet high single sandstone

- (a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true, R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

E. In figure drawing, studying the Torso helps artists to understand:

- (a) Facial expressions (b) Body proportions and posture
(c) Hair style & design (d) Jewellery and costume

F. The Bhimbetka rock art site is recognised by UNESCO as:

- (a) Cultural Heritage Site (b) Natural Heritage Site
(c) Mixed Heritage Site (d) World Biosphere Site

G. The pillars of Ashoka were mainly erected for:

- (a) Decoration of palaces
- (b) Religious edicts and moral messages
- (c) Military records
- (d). Astronomical studies

H. What for 'Yakshis' symbolized?

- (a) They are symbolised as priest
- (b) They stand for fertility and abundance,
- (c) They are the dancers of the court.
- (d) They are court Musician

SECTION-B

(Short answer type questions)

The answer to this question is expected around 100 to 150 words.

[2x5=10]

2. (a) Why is Bhimbetka included in the list of UNESCO World Heritage Sites? Justify with reasons.

OR

(b) Why were natural pigments like red ochre and white used in Bhimbetka cave paintings, and how did these materials survive for so long?

3. (a) Describe a sculpture found in the Harappa.

OR

(b) Analyse the artistic aspects of two female sculpture from Indus Valley civilization.

4. (a) Describe earthen ware pot of Indus Valley Civilisation and their possible uses.

OR

(b) List the main materials used in Indus Valley Civilisation art.

5. (a) Identify the paintings of Bhimbetka. Give a brief description on the Bhimbetka rock art ?

OR

(b) Explain the artistic and cultural significance of the "Bull seal" excavated from Mohenjo-Daro.

6. (a) A classic, life size sculpture is the Indian ideal of feminine beauty from Marayan period. Identify the sculpture and validate the comment by describing it .

OR

(b) Mother goddesses were worshiped as a God of fertility and prosperity. Give a brief description of the sculpture,

SECTION-C

Attempt any two questions from the given options (Long answer type questions)

An answer for this question is expected in around 250 to 300 words

[6x2=12]

7. (a) Write a detailed note on the themes, subjects, and techniques used in Bhimbetka cave paintings.

(b) What were the purpose of Prehistoric Cave Paintings and write about different Stone Age periods art.

8. (a) How can you say that the Art of Indus Valley Civilization was highly developed?

(b) Evaluate the contribution of Indus Valley art in the development of Indian sculpture and visual culture.

(c) Identify the sculpture, Explain the process in making it and analyse its artistic features.



9. (a) What is the significance of the Lion Capital of Ashoka. (Hint: Focus on polish, monolith structure, animal capitals, and inscriptions.)
- (b) Explain the symbolism associated with the icon.





DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 2 Hours

Subject - Odissi Dance
Maximum Marks - 30

General Instructions:

1. The Question Paper contains three sections: A, B and C.
2. Section A has 8 questions. All questions are compulsory. 1x8
3. Section B has 7 questions. Attempt any 5 questions. 2x5
4. Section C has 3 questions. Attempt any 2 questions. 2x6

SECTIONS: A

1. Fill in the Blanks

- (a) Elements of Indian classical dance are mentioned in the ancient text called _____.
- (b) The Natyashastra was created by _____ at the beginning of the _____ Yuga.
- (c) After losing his brothers, Yudhishtira staked _____ in the gambling match.
- (d) The Dashavatara refers to the _____ avatars of Lord Vishnu.
- (e) Nataraja means _____ of Dance.
- (f) The demon _____ represented ignorance and epilepsy.
- (g) The 108 Karanas and 32 Angaharas described by Bharata come under _____.
- (h) Maharis were the temple dancers of _____.

SECTIONS: B

2. What do the terms suddha and desipaddhatis mean in the context of dance styles?
3. What do you know about the word laya? Write the name of three layas.
4. Explain how Krishna defeated Kāliya and what the outcome of this victory was for both Kāliya and the Yamunā river.
5. Describe the story of Apasmara and Lord Shiva's Nataraja form.
6. Explain the concept of Nritya with its types.
7. Write a note on Natya as explained in the Natya Shastra.
8. Discuss the role and significance of Maharis in the Jagannath Temple of Puri.

SECTIONS: C

9. Write the notation of Rupak Taal with its calculation of Matra, Vibhag and Chhand.
10. Explain why Lord Vishnu takes different avatars.
11. Explain the meaning of the word Nataraja. How is Lord Shiva depicted in this form?



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 3 Hours

Subject - Spanish
Maximum Marks- 80

General instructions:

All questions in all sections are mandatory.

Please note the internal choices given in the various sections.

Sección - A

1. Completa el texto con la forma adecuada del verbo en tiempo presente:
(Ir, Gustar, Ser, Tener, Desayunar) [5]
Hoy.....el lunes y tengo clase de Inglés. También clase de matemáticas, español y ciencia. Me visto, y comienzo el camino hacia el colegio.
Luego, me encuentro con mi amigo Carlos. Nosotros dos juntos a clase desde que eramos niños y siempre a nosotros jugar al tenis en el parque, mi deporte favorito.
2. Completa cinco frases con el pronombre 'se' y el verbo en tercera persona, singular o plural. [5]
 - a) Para este trabajo más gente. (necesitar)
 - b) En nuestra casa solo español. (hablar)
 - c) muchos apartamentos en este barrio. (alquilar)
 - d) dos personas para el servicio de limpieza del ayuntamiento. (necesitar)
 - e) Perdone, ¿..... diccionarios de español en esta librería? (vender)
3. Rellena los huecos con el imperativo : [5]
 - a) ¡No el fuego en el bosque! (hacer, ustedes)
 - b) ¡..... la ropa formal para entrar este restaurante! (llevar, usted)
 - c) ¡No al fútbol en el pasillo! (jugar, vosotros)
 - d) ¡No en la clase! (dormir, vosotros)
 - e) ¡..... las palabras en el diccionario! (buscar, ustedes)
4. Completa las frases con la forma adecuada de los verbos entre paréntesis en el pasado: [5]
 - a) Ayer Yo (llamar) a mi tía, pero ella no (coger) el teléfono.
 - b) Esta mañana (despertarse) muy temprano.
 - c) Cuando (ser) pequeña, siempre (jugar) con mis hermanos.
 - d) Ayer (tener) mucho dolor en mi cabeza por eso no (poder) dormir toda la noche.
 - e) Antes de venir a España,(trabajar) en una empresa multinacional.

5. Completa cinco frases con pronombres en español: [5]

- a) ¿(Se / Les) _____ has dicho a tus alumnos que vengan diez minutos antes?
- b) Ayer (nos / se) _____ fuimos del cine antes de que terminara la película.
- c) Así es, (yo / me) _____ llevo doce años viviendo en este barrio.
- d) Si no te ha entendido, (se lo / le lo) _____ explicas otra vez y punto.
- e) Si no te ha entendido, (se lo / le lo) _____ explicas otra vez.

6. Elige la opción correcta: [5]

- a) Isabel deja _____ trabajar en una empresa de moda.
(i) con (ii) de (iii) por (iv) en
- b) d) Ellos siempre corren _____ esta calle y van al estadio para cumplir el maratón.
(i) con (ii) de (iii) por (iv) en
- c) e) _____ falda es muy elegante, ¿dónde compraste?
(i) mi (ii) tu (iii) mío (iv) tuyo
- d) f) La casa _____ está en la calle de San Martín. ¿Dónde está la _____?
(i) mía/tuya (ii) mío/tuya (iii) mis/suya (iv) mía/suyo
- e) g) ¿_____ van a regresar de las vacaciones sus padres?
(i) Dónde (ii) Cuándo (iii) Qué (iv)Cuál

7. Completa las frases conjugando los verbos entre paréntesis en el presente de subjuntivo:

[5]

- a) Es importante que (estudiar, vosotros) todo el día.
- b) No creo que Pilar y Martha (tener) razón.
- c) No creo que él (ir) hoy.
- d) Espero que (saber) las notas.
- e) No creo que mis padres (querer) ir a Argentina este mes.

Sección - B

8. Lee el texto y responde a las preguntas:

[2X5=10]

EL SUEÑO DE MI VIDA

Mi nombre es Juan Carlos Sánchez y desde que tengo uso de razón, mi sueño es ser jugador de la NBA. Mi madre me recomienda que estudie y que no pierda el tiempo en intentar alcanzar ese objetivo ya que, para jugar en una liga como la NBA, necesitas nacer con un don.

Sinceramente, siempre me gusta hacer caso a mi familia y seguir sus consejos, pero quiero que se sientan orgullosos de mí y me gustaría demostrarles de lo que soy capaz, ya que, con trabajo, se puede llegar muy lejos. Tengo que decir que jamás he jugado al baloncesto en un equipo profesional, pero ojalá tenga la oportunidad de al menos, disfrutar de mi pasión en una división inferior.

Siempre me fijo en los grandes deportistas y cuando vaya a la universidad, estudiaré ciencias del deporte porque creo que es el inicio del camino que debo seguir y no dejaré de intentar alcanzar mi sueño hasta que lo consiga. Además, me encantan los retos, y aunque venga de una familia humilde, hay muchos jugadores o entrenadores que han conseguido cumplir el sueño de estar entre los más grandes de la historia partiendo desde cero y yo quiero ser el siguiente.

Si no consigo mi objetivo, me dedicaré al análisis deportivo y a colaborar con agencias de representación de jugadores profesionales ya que el tema de contrataciones y estar cerca de los deportistas más grandes de la historia es y será mi objetivo.

- a) ¿Qué recomendaciones recibe Juan Carlos de su madre?
- b) ¿Cómo quiere Juan Carlos que su familia se sienta por él?
- c) ¿Cuántos años ha jugado Juan Carlos como profesional?
- d) ¿La familia de Juan Carlos tiene mucho dinero?
- e) ¿Qué hará Juan Carlos si no consigue su objetivo?

9. Lee el texto y contesta: Verdadero o Falso:

[1X5=5]

FERIA DE MÁLAGA

Hace tres años, y hablando como si fuera una excepción ya que no salgo mucho, fui por primera vez a la Feria de Málaga. Estuve disfrutando de la feria desde el lunes por la mañana hasta el sábado por la tarde. Mi amigo José me invitó o mejor dicho, me obligó a que me quedara en su casa durante los días que visitase Málaga. No lo dudé ni un segundo ya que siempre que él viene a Madrid a visitarme se queda en mi piso, montamos fiestas en mi casa hasta altas horas y no podía decirle que no.

Cuando llegué a la ciudad, después de seis horas de autobús, dejamos las maletas y fuimos a beber unos vinos típicos a la calle Larios. Acto seguido, llegó la hora de comer y nos fuimos a la playa de la Malagueta a comer unos espetos. Nunca había probado este tipo de pescado y la verdad que me encantaron. Pedimos aproximadamente unas tres raciones de espetos para cada uno, pero no recuerdo exactamente cuántas fueron la verdad.

Al terminar de comer, mi amigo quiso que fuéramos a la plaza de la Constitución porque todos sus amigos y amigas estaban allí y ya le habían llamado más de quince veces para preguntarle que dónde estábamos. Los amigos se portaron muy bien conmigo durante toda la feria y la verdad que me sentí como si de mi grupo de amigos se tratara.

Cuando cortaron la música, nos fuimos a una disco del centro para continuar bailando ya que era el día más importante de la feria y teníamos muchas ganas de seguir disfrutando del día y, sobre todo, de la tarde tan fresquita que se había quedado. Sobre las dos de la mañana

decidimos volver a casa y mi amigo me preguntó que si quería volver en taxi y yo le contesté que prefería que fuéramos caminando porque no hacía el mismo calor que por la tarde.

- a) Se cortaron los cables de la música. V/F
- b) Volvieron caminando por la noche porque estaba fresca. V/F
- c) Los amigos de José Esperaron en la Plaza de la Constitución. V/F
- d) Pidieron seis raciones de espetos para cada uno. V/F
- e) Carlos alquiló una habitación en un hotel. V/F

Sección - C

10. Escribe una carta a tu hermano menor que ha sacado malas notas en su resultado, tienes que aconsejarle unos puntos para mejorar sus notas. Escríbele un mensaje de Whatsapp (usando el lenguaje informal) dándole algunos consejos sobre cómo relajarse y organizar su tiempo para estudiar mejor. Incluye al menos 2 o 5 consejos específicos y una frase de ánimo.
(70-90 palabras) [5]

11. (A) Escribe una entrada de blog sobre las ventajas y desventajas de estudiar en el extranjero. Explica tu opinión personal y tus experiencias si las has tenido. (150-180 palabras) [10]

Ó

- (B) ¿Qué es más importante para ti: la familia o los amigos? Escribe un ensayo explicando tu opinión y da al menos tres razones para apoyar tu punto de vista apoyándote en ejemplos concretos o experiencias personales.
(150-180 palabras)

Sección - D

12. Responde a cualquiera de las cinco preguntas sobre autores hispanos (40-45 palabras). [5x2=10]
- a) ¿Quién escribió el 'Quijote'? ¿Cuál es el argumento principal de la obra?
 - b) ¿Quién fue Juan Rulfo? ¿Cuáles son las obras más importantes de él?
 - c) ¿Qué sabes de la vida y obra de Pablo Neruda? ¿Has leído algún poema de Pablo Neruda? Comentar.
 - d) ¿Qué temas explora Juan Rulfo en sus obras y por qué son importantes?
 - e) ¿Qué sabes de la vida y obra de Gabriel García Márquez?
 - f) Escribir algunas frases sobre Federico García Lorca.
 - g) Escribir un texto breve sobre Antonio Buero Vallejo.

13. Lee las siguientes afirmaciones e indica si son verdaderas (V) o falsas (F). Elige las cinco que prefieras. [5x1=5]

- a) Aunque originario de Perú, el ceviche se ha convertido en un plato representativo en varias regiones costeras de Hispanoamérica, incluyendo México y Ecuador. (Verdadero / Falso)
 - b) La Feria de Abril, celebrada en Valencia, es famosa por sus casetas, trajes flamencos y espectáculos ecuestres. (Verdadero / Falso)
 - c) El mate es una bebida típica que se consume en algunos países de América del Sur, especialmente en Argentina, Uruguay y Paraguay. (Verdadero / Falso)
 - d) El Día de la Hispanidad, que se celebra el 12 de octubre, conmemora la llegada de los españoles a Asia en 1492. (Verdadero / Falso)
 - e) Durante la celebración del Inti Raymi, los pueblos andinos rinden homenaje al dios del maíz mediante ofrendas marinas y bailes costeros. (Verdadero / Falso)
 - f) La capital de Uruguay es Montevideo. (Verdadero / Falso)
 - g) El estrecho de Gibraltar separa a España de África. (Verdadero / Falso)
 - h) El español es lengua oficial en más de 20 países. (Verdadero / Falso)
-



DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

HALF YEARLY EXAMINATION (2025-26)

Class - XI
Time - 1 Hour

Subject - General Studies
Maximum Marks- 50

Select the most suitable alternative:

(10 x 1=10)

1. Who took charge as India's 26th Chief Election Commissioner in February 2025?
(A) Rajiv Kumar
(B) Gyanesh Kumar
(C) Sushil Chandra
(D) Rachana Ranade
2. Which country is hosting the G20 Summit in 2025?
(A) India
(B) United States
(C) South Africa
(D) Japan
3. Which semi-high-speed train did India recently launch in 2025?
(A) Tejas Express
(B) Vande Bharat Express
(C) Uday Express
(D) Rajdhani Express
4. Which mission confirmed the presence of water ice on the Moon?
(A) Chandrayaan-1
(B) Chandrayaan-2
(C) Chandrayaan-3
(D) Chandrayaan-4
5. What is the name of India's first full-stack quantum computer launched in 2025?
(A) NQubit-Prime
(B) Bharat-Q
(C) QpiAI-Indus
(D) Quantum-India
6. Which Kerala panchayat became India's first 100% fully digital literate panchayat?
(A) Maniyur
(B) Pullampadi
(C) Pullupara
(D) Pullampra

7. Which Indian state became the first to legally implement the Uniform Civil Code (UCC)?
(A) Goa
(B) Uttar Pradesh
(C) Uttarakhand
(D) Kerala
8. What is the purpose of the newly launched "PM-SURAJ" portal?
(A) Promote rural tourism
(B) Give business loans up to Rs.15 lakh to SC/ST/OBC & sanitation workers
(C) Digital literacy in villages
(D) Climate resilience funding
9. Who won the 2025 Australian Open men's singles title?
(A) Novak Djokovic
(B) Carlos Alcaraz
(C) Daniil Medvedev
(D) Jannik Sinner
10. What fiscal deficit target was announced in the 2025 Union Budget of India?
(A) 3.8% of GDP
(B) 4.4% of GDP
(C) 5.1% of GDP
(D) 6.0% of GDP

Q.11 - Q.15 Essay type questions (word limit 150 -200):

(5 x 8 = 40)

11. In June 2025, several countries signed new commitments at COP30 in Brazil to phase out fossil fuel subsidies by 2030. Discuss the potential economic and social challenges that developing countries might face in implementing this agreement, and propose strategies to manage a just transition to renewable energy.
12. The European Union implemented the AI Act in 2025, the world's first comprehensive law regulating artificial intelligence. Considering the growing global influence of AI, how can developing nations balance innovation and ethical regulation while avoiding digital colonization by tech giants?
13. With tensions escalating in the South China Sea due to new military installations by China in mid-2025, evaluate how ASEAN member states can leverage diplomatic and strategic alliances to maintain regional stability without escalating conflict.
14. In response to a resurgence of a mutated H1N1 flu strain in 2025, WHO revised its pandemic response framework. How can low-income countries improve their pandemic preparedness and vaccine access despite limited resources? Discuss with examples of successful low-cost models.
15. Following the introduction of the BRICS+ Digital Currency System in early 2025, some nations are considering alternatives to the US dollar for trade settlements. Assess the potential impact of this shift on global trade dynamics and the geopolitical balance of power.