SAMPLE PAPER
GRADE – 8th

SECTION – A (English)

1. **Identify the main (principal) clause in this complex sentence.**
   'The candidate who performs best under pressure will be selected for the SSB interview, provided he clears the medical examination.'
   (A) who performs best under pressure
   (B) The candidate will be selected for the SSB interview
   (C) provided he clears the medical examination
   (D) will be selected for the SSB interview
2. **Which of the following uses a gerund (an ' – ing' verb acting as a noun) ?**
   (A) He is planning to launch a new initiative.
   (B) The screaming engines deafened the crew.
   (C) Managing logistics requires acute attention to detail.
   (D) They have been running the drills all morning.
3. **Tick the sentence where the subject and verb agree properly.**
   (A) A multitude of challenges confront the new administration.
   (B) Neither the commander nor his subordinates was aware of the ambush.
   (C) The series of lectures on strategy were highly informative.
   (D) Bread and butter are his daily breakfast.
4. **What is the correct passive form of this proverb ?**
   'One must endure what one cannot cure.'
   (A) What cannot be cured must be endured.
   (B) What one cannot cure must be endured by one.
   (C) What is unable to be cured must be endured.
   (D) One must be endured by what cannot be cured.
5. **Change to indirect speech.**
   The tactician said, 'Had I known about the terrain, I would have deployed the snipers differently.'
   (A) The tactician said that if he knew about the terrain, he would deploy the snipers differently.
   (B) The tactician stated that had he known about the terrain, he would have deployed the snipers differently.
   (C) The tactician said that he had known about the terrain and would deploy snipers differently.
   (D) The tactician exclaimed that knowing the terrain would change the deployment.
6. **What kind of phrase is highlighted here ?**
   'The officer, a man of immense integrity, refused the bribe.'
   (A) Adjective Phrase
   (B) Noun Phrase in Apposition
   (C) Adverb Phrase
   (D) Prepositional Phrase

7. Choose the best conjunction to connect this thought.

'_____ you comply with the standard operating procedures, your safety cannot be guaranteed.'

(A) If (B) Provided (C) Unless (D) Until

8. Find the sentence that uses the WRONG preposition.

(A) The tribunal consists of five senior members.

(B) She bears a striking resemblance with her mother.

(C) He was acquitted of all charges.

(D) They agreed to the proposal.

9. Which sentence uses a 'to – verb' (infinitive) to show purpose ?

(A) To err is human. (B) She went to the armory to fetch her gear.

(C) To be honest, I am exhausted. (D) I like to read military history.

10. Which sentence smoothly shifts from a past ongoing action to a simple past event ?

(A) He had been monitoring the radar for hours before the blip appeared.

(B) He has been monitoring the radar before the blip had appeared.

(C) He was monitoring the radar when the blip had appeared.

(D) He had monitored the radar before the blip was appearing.

SECTION – B (Social Science)

11. Which of the following is a renewable resource ?

(A) Coal (B) Petroleum (C) Solar energy (D) Natural gas

12. Which crop is mainly grown during the Kharif season in India ?

(A) Wheat (B) Rice (C) Gram (D) Mustard

13. Which industry is known as the backbone of modern industry ?

(A) Cotton textile industry (B) Iron and steel industry

(C) Sugar industry (D) Paper industry

14. In which year was the Battle of Plassey fought ?

(A) 1757 (B) 1764

(C) 1857 (D) 1885

15. Who was the Governor-General of India during the Revolt of 1857 ?

(A) Lord Dalhousie (B) Lord Canning

(C) Lord Curzon (D) Lord Mountbatten

16. Who founded the Indian National Congress in 1885 ?

(A) Mahatma Gandhi (B) Subhas Chandra Bose

(C) A. O. Hume (D) Jawaharlal Nehru

17. Who is known as the Father of English Education in India ?

(A) Lord Macaulay (B) Lord Curzon

(C) Lord Ripon (D) Warren Hastings

18. When did the Constitution of India come into force ?

(A) 15 August 1947 (B) 26 January 1950

(C) 26 November 1949 (D) 2 October 1950

19. Which House of the Indian Parliament is known as the Lower House ?

(A) Rajya Sabha (B) Lok Sabha

(C) Legislative Council (D) Supreme Court

20. Which is the highest judicial body in India ?

(A) District Court (B) High Court

(C) Supreme Court (D) Gram Nyayalaya

SECTION – C (Science)

21. Before sowing seeds in agricultural fields, farmers thoroughly turn and loosen the soil. Which structural tool is systematically used for this tilling process to aerate the root zones ?

(A) Combine Harvester (B) Silo Bin

(C) Plough or Cultivator (D) Seed Drill Tube

22. Certain microbes live in a symbiotic association within the root nodules of leguminous plants like beans and peas. Which specific biological agent fixes atmospheric nitrogen inside these nodules ?

(A) Lactobacillus bacteria (B) Rhizobium bacteria

(C) Aspergillus fungus (D) Amoeba protozoan

23. Cell components carry out specialized functions to maintain metabolism. Which membrane-bound cell organelle functions as the powerhouse by synthesizing ATP molecules through cellular respiration ?

(A) Golgi Apparatus (B) Endoplasmic Reticulum

(C) Mitochondrion (D) Lysosome

24. Animals display diverse mechanisms to ensure the continuation of their species. What classification is given to organisms, such as cows, humans, and dogs, that give birth to live young ones ?

(A) Oviparous organisms (B) Viviparous organisms

(C) Metamorphic organisms (D) Budding organisms

25. Endocrine glands release chemical messengers directly into the bloodstream to coordinate bodily alterations. Which specific hormone is secreted by the pancreas to regulate blood glucose concentrations ?

(A) Thyroxine (B) Adrenaline (C) Testosterone (D) Insulin

26. Which of the following statements about synthetic fibres is correct ?

(A) Rayon is a pure synthetic fibre obtained completely from chemical substances.

(B) Nylon was the first fully synthetic fibre and is used for making parachutes and ropes.

(C) Polyester is prepared from petrochemicals and is never blended with cotton.

(D) Acrylic is a natural fibre obtained from sheep.

27. A metal X reacts with dilute hydrochloric acid to liberate hydrogen gas. Its oxide is basic in nature. Another metal Y does not react with dilute HCl but its oxide dissolves in both acids and bases. X and Y are most likely :

(A) X = Copper, Y = Zinc (B) X = Sodium, Y = Aluminium

(C) X = Iron, Y = Copper (D) X = Zinc, Y = Sodium

28. Which of the following is the correct sequence of products obtained when coal is heated in the absence of air (destructive distillation) ?

(A) Coal gas, Coal tar, Coke, Ammoniacal liquor

(B) Coke, Coal tar, Coal gas, Ammoniacal liquor

(C) Coal tar, Coke, Coal gas, Ammoniacal liquor

(D) Ammoniacal liquor, Coal gas, Coal tar, Coke

29. Which of the following is an example of rapid combustion ?

(A) Burning of coal in a hearth

(B) Burning of phosphorus in air at room temperature

(C) Burning of LPG in a gas stove

(D) Rusting of iron

30. Assertion (A) : Plastics are non-biodegradable.

Reason (R) : Microorganisms cannot break down plastics easily.

(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.

31. An elephant weighing 40,000 N stands on one foot of area 1,000 cm². A scientist standing next to it wears high heels, exerting her entire weight of 500 N on a single heel of area 1 cm². Which of the following statements correctly compares the pressure they exert on the ground ?

(A) The elephant exerts 8 times more pressure than the scientist.

(B) The scientist exerts 12.5 times more pressure than the elephant.

(C) The scientist exerts 50 times more pressure than the elephant.

(D) Both exert exactly the same amount of pressure on the ground.

32. A block of wood is dragged across a smooth marble tabletop, a rough concrete pathway, and a waxed wooden board using identical forces. If the frictional force measured is F1, F2, and F3 respectively, which of the following sequences represents the correct ascending order of friction ?

(A) F1 < F3 < F2 (B) F2 < F3 < F1 (C) F1 < F2 < F3 (D) F3 < F1 < F2

33. A tuning fork vibrates to produce a sound wave with a high frequency but a low amplitude. How will this specific sound wave be perceived by a human observer standing nearby ?

(A) A loud sound with a low pitch.

(B) A faint sound with a low pitch.

(C) A loud sound with a high pitch.

(D) A faint sound with a high pitch.

34. During an electroplating experiment to coat an iron key with copper, a student sets up a copper sulphate solution circuit. Which arrangement of electrodes will successfully achieve the desired uniform coating ?

(A) The iron key must be connected to the positive terminal (anode).

(B) The iron key must be connected to the negative terminal (cathode).

(C) Both the copper plate and iron key must be connected to the positive terminal.

(D) Carbon rods must be used instead of a copper plate to feed the electrolyte.

35. Two plane mirrors are placed parallel to each other facing inward, separated by a distance of 20 cm. An object is placed exactly at the midpoint (10 cm) between them. What is the total number of images theoretically formed by this optical arrangement ?

(A) 2 images (B) 4 images (C) 20 images (D) Infinite images

SECTION – D (Reasoning)

36. Select the option which is related to the sixth term in the same way as the first term is related to the second term and the third term is related to the fourth term :

169 : 182 : : 225 : 240 : : ? : 306

(A) 195 (B) 289 (C) 192 (D) 291

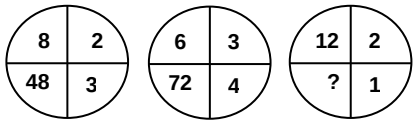
37. In a certain code language, 'HELATH' is written as 'CGJJVN' and 'CHARGE' is written as 'CJEGIT'. How will 'HOURSE' be written in that language ?

(A) WQJGUT (B) GNSSTF (C) TNGDRQ (D) VPIFTS

38. A, G, L, P, S, ?

(A) Y (B) W (C) X (D) U

39. Out of the given alternative, find the missing number ?



(A) 24 (B) 48 (C) 56 (D) 12

40. 'A + B' means A is the father of B', 'A – B' means 'A is the wife of B', 'A × B' means 'A is brother of B', 'A ÷ B' means 'A is the daughter of B'. If 'P – R × Q + S', then which of the following statements is true ?

(A) P is sister – in – law of Q (B) Q is sister – in – law of P

(C) P is sister – in – law of S (D) P is sister – in – law of R

41. V, X, Y and Z are playing cards, X is to the left of Y and V is to the right of Z. If X is facing West, which direction is V facing ?

(A) West (B) North (C) South (D) East

42. Select the correct combination of mathematical symbols from the following options to sequentially replace the % signs in the given equation and balance the equation :

48 % 12 % 5 % 5 % 4

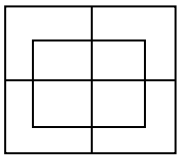
(A) ÷, ×, = × (B) ×, ÷, =, − (C) ×, =, −, ÷ (D) ÷, ×, =, −

43. If the mirror is placed at PQ as shown below, then select the correct mirror image of the given letter combination :



(A) (B) (C) (D)

44. How many squares are there in this figure ?



(A) 7 (B) 12 (C) 8 (D) 10

45. In a code language, if PETROL is coded as ODSQNK and ENGINE is coded as DMFHMD, then how will VEHICLE be coded ?

(A) UDGHBKD (B) UDHGKBD (C) WFIJDMF (D) WDIHDKF

SECTION – E (Mathematics)

46. Find the smallest square number which is exactly divisible by each of the numbers 8, 15, and 20.

(A) 900 (B) 1600 (C) 3600 (D) 2500

47. If $\sqrt{x+\sqrt{x+\sqrt{x}}}=6$, then find the value of x.

(A) 36 (B) 30 (C) 42 (D) 24

48. Evaluate the value of $\sqrt[3]{(0.000729)}+\sqrt[3]{(0.027)}$.

(A) 0.39 (B) 0.12 (C) 0.45 (D) 0.09

49. If $x+\frac{1}{x}=5$, then find the value of $x^4+\frac{1}{x^4}$.

(A) 527 (B) 625 (C) 529 (D) 727

50. If a + b + c = 9 and ab + bc + ca = 26, find the value of $a^2 + b^2 + c^2$.

(A) 81 (B) 29 (C) 55 (D) 43

51. Find the least number that must be subtracted from 5607 to get a perfect square.

(A) 131 (B) 96 (C) 121 (D) 82

52. A standard three – digit number 'abc' is divisible by 11 if and only if :

(A) (a + (C) − b is a multiple of 11 or 0

(B) a + b + c is a multiple of 11

(C) (a + (B) − c = 0

(D) a × b × c is divisible by 11

53. The capacity of a closed cylindrical water tank is 15.4 liters. If its height is 1 meter, find the radius of its base (Note: 1 m^3 = 1000 liters).

(A) 7 cm (B) 14 cm (C) 21 cm (D) 3.5 cm

54. If a metallic cube of side 12 cm is melted and recast into smaller cubes of side 3 cm, how many small cubes can be formed ?

(A) 16 (B) 32 (C) 64 (D) 48

55. Simplify : $\left[\frac{(2^{n+4}-2\times 2^n)}{(2\times 2^{n+3})}\right]+2^{-1}$

(A) 1 (B) 2 (C) $\frac{7}{8}$ (D) $\frac{9}{8}$

56. If $\left(\frac{5}{3}\right)^{-5}\times\left(\frac{5}{3}\right)^{-11}=\left(\frac{5}{3}\right)^{88x}$**, then find the value of** x**.**

(A) -2 (B) $-\frac{1}{2}$ (C) 2 (D) $\frac{1}{4}$

57. Solve for x **:** $\frac{(x-2)}{(x+1)}=\frac{2}{5}$

(A) 4 (B) 3 (C) 2 (D) 12

58. The present age of a father is three times that of his son. Five years ago, his age was four times that of his son. Find the father's present age.

(A) 45 years (B) 60 years (C) 36 years (D) 40 years

59. If $4^x-4^{x-1}=24$**, then find the value of** $(2x)^x$**.**

(A) 5 (B) 25 (C) 125 (D) 625

60. The diagonal of a quadrilateral field is 24 m and the perpendiculars dropped on it from the remaining opposite vertices are 8 m and 13 m. Find the area of the field.

(A) 252 m^2 (B) 504 m^2 (C) 210 m^2 (D) 300 m^2