SAMPLE PAPER
GRADE – 7th

SECTION – A (English)

1. **Identify the option that correctly classifies the following sentence :**
   'Having reviewed the tactical map, the commander issued fresh orders, but the patrol remained on standby.'
   (A) Simple Sentence (B) Compound Sentence
   (C) Complex Sentence (D) Compound – Complex Sentence
2. **In the sentence below, identify the grammatical function of the underlined phrase :**
   'The cadets marched through the treacherous swamp with unflinching resolve.'
   (A) Adjective Phrase modifying 'swamp' (B) Adverb Phrase of Manner modifying 'marched'
   (C) Noun Phrase acting as direct object (D) Absolute Phrase modifying the entire clause
3. **Identify the sentence that contains a Noun Clause acting as the object of a preposition :**
   (A) The sergeant listened to what the scout had reported.
   (B) That the perimeter was compromised alarmed the squad.
   (C) We reached the valley where the stream originates.
   (D) He promised that the rations would arrive before nightfall.
4. **Choose the sentence with the correct Subject – Verb Agreement :**
   (A) Either the senior instructor or his assistants is responsible for the gear inspection.
   (B) Either the senior instructor or his assistants are responsible for the gear inspection.
   (C) Either the senior instructor or his assistants has been responsible for the gear inspection.
   (D) Either the senior instructor or his assistants was responsible for the gear inspection.
5. **Select the sentence that features an error in Subject – Verb Agreement :**
   (A) The commander, together with two riflemen, has secured the ridge.
   (B) Ten kilometers is a grueling distance to run under heavy kit.
   (C) A variety of survival tactics was demonstrated at the drill ground.
   (D) The committee were divided in their assessment of the candidate.
6. **Identify the role of the underlined non – finite verb in the following sentence :**
   'Navigating by stellar positions requires rigorous practice.'
   (A) Present Participle functioning as an adjective
   (B) Gerund functioning as the subject of the verb 'requires'
   (C) Bare Infinitive functioning as a noun complement
   (D) Perfect Participle functioning as an adverbial modifier
7. **Which of the following sentences correctly incorporates a 'bare infinitive' ?**
   (A) The warden made the recruit polish his boots once again.
   (B) The recruit was ordered polish his boots once again.
   (C) The warden wanted the recruit polish his boots once again.
   (D) To polish his boots once again was demanding for the recruit.

8. **Identify the sentence that contains a dependent Adjective (Relative) Clause :**
   (A) He signaled when the perimeter lights went out.
   (B) The bunker which was constructed on the northern ridge withstood the shelling.
   (C) Because the radio transmitter malfunctioned, we fell back.
   (D) He wondered whether reinforcements would reach before dawn.
9. **Choose the sentence where a participle is used correctly without creating a dangling modifier :**
   (A) Standing on the observation deck, the coastline looked serene.
   (B) Standing on the observation deck, the scout monitored the coastline.
   (C) After running for three miles, his stamina completely failed.
   (D) Having sounded the retreat, the bugle was packed away.
10. **Convert the following simple sentence into a complex sentence :**
   'On hearing the alarm, the sentry cocked his rifle.'
   (A) The sentry heard the alarm and cocked his rifle.
   (B) As soon as the sentry heard the alarm, he cocked his rifle.
   (C) Hearing the alarm made the sentry cock his rifle.
   (D) The sentry cocked his rifle on account of hearing the alarm.

SECTION – B (Social Science)

11. **Which is the largest state of India by area ?**
   (A) Uttar Pradesh (B) Rajasthan
   (C) Madhya Pradesh (D) Maharashtra
12. **Which planet is known as the Red Planet ?**
   (A) Venus (B) Jupiter (C) Mars (D) Saturn
13. **Who was the first Mughal emperor of India ?**
   (A) Akbar (B) Humayun (C) Babur (D) Shah Jahan
14. **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
15. **Which is the lower house of the Indian Parliament ?**
   (A) Rajya Sabha (B) Lok Sabha
   (C) Vidhan Parishad (D) Vidhan Sabha
16. **Which is the capital of Rajasthan ?**
   (A) Jodhpur (B) Udaipur (C) Jaipur (D) Kota
17. **Which gas is most abundant in Earth's atmosphere ?**
   (A) Oxygen (B) Nitrogen (C) Carbon dioxide (D) Hydrogen
18. **What is the main occupation of people in rural India ?**
   (A) Banking (B) Agriculture
   (C) Information Technology (D) Mining
19. **Which institution issues currency notes in India, except the one – rupee note ?**
   (A) State Bank of India (B) Ministry of Finance
   (C) Reserve Bank of India (D) NITI Aayog
20. **What is a market ?**
   (A) A place or system where buyers and sellers exchange goods and services
   (B) A place only for farming
   (C) A government office
   (D) A place only for manufacturing

SECTION – C (Science)

21. Cuscuta (Amarbel) is an example of an organism that derives nutrition from another living plant without giving any benefit in return. What type of nutrition is this ?

(A) Saprotrophic nutrition (B) Autotrophic nutrition
(C) Parasitic nutrition (D) Symbiotic relationship

22. In the human digestive system, the inner walls of the small intestine have thousands of finger-like outgrowths called villi. What is the primary function of these villi ?

(A) To digest proteins mechanically
(B) To increase surface area for the absorption of digested food
(C) To secrete bile juice into the digestive tract
(D) To prevent acid from entering the large intestine

23. Tiny pores present on the surface of green leaves are guarded by special bean-shaped cells called guard cells. These pores regulate gas exchange and transpiration. What are they called ?

(A) Tracheae (B) Stomata (C) Lenticels (D) Chloroplasts

24. During heavy physical exercise, human muscle cells experience a temporary shortage of oxygen and undergo anaerobic respiration. What chemical product accumulates in the muscles causing cramps ?

(A) Ethanol (B) Carbon dioxide (C) Lactic acid (D) Acetic acid

25. Yeast respires anaerobically without using oxygen to convert sugars into simple elements. Which commercial byproducts are produced as a result of this metabolic process ?

(A) Lactic acid and Water (B) Alcohol and Carbon dioxide
(C) Oxygen and Glucose (D) Citric acid and Nitrogen gas

26. Which of the following indicators is obtained from lichens ?

(A) Turmeric (B) China rose (C) Litmus (D) Phenolphthalein

27. When a drop of turmeric solution is put on a basic substance, the colour becomes :

(A) Yellow (B) Red (C) Blue (D) Colourless

28. Which of the following is NOT a chemical change ?

(A) Rusting of iron (B) Burning of magnesium ribbon
(C) Melting of ice (D) Digestion of food

29. The chemical formula of baking soda is :

(A) Na_2CO_3 (B) $NaHCO_3$ (C) NaOH (D) $Ca(OH)_2$

30. Neutralisation reaction always produces :

(A) Only salt (B) Salt and water (C) Only water (D) Acid and base

31. A wooden spoon is dipped in a cup of ice cream. Its other end _____.

(A) becomes cold by the process of conduction (B) becomes cold by the process of convection
(C) becomes cold by the process of radiation (D) does not become cold

32. Two objects, A (at 40°C) and B (at 40°C), are brought into contact with each other. The heat will.

(A) flow from object A to B (B) flow from object B to A
(C) not flow from either object to the other (D) increase the temperature of both objects

33. If a simple pendulum takes 36 seconds to complete 20 oscillations, what is the time period of the pendulum ?

(A) 1.8 seconds (B) 0.55 seconds (C) 3.6 seconds (D) 2.0 seconds

34. High-speed winds are accompanied by _____.

(A) increased atmospheric pressure (B) reduced atmospheric pressure
(C) no change in atmospheric pressure (D) heavy freezing conditions instantly

35. A compact disc (CD) exposed to sunlight displays a rainbow-like multi-colour pattern. This phenomenon proves that _____.

(A) white light consists of seven colors (B) the material of a CD can generate artificial light
(C) light can bend easily around sharp corners (D) light travels faster in air than inside solids

SECTION – D (Reasoning)

36. Which number will replace the question mark (?) in the following series ?
0, 4, 18, 48, ?, 180
(A) 58 (B) 68 (C) 84 (D) 100

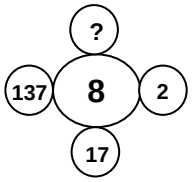
37. Which letters will replace the question marks (?) in the following series ?
p_qsp_ _sprq_prqs
(A) srqs (B) rrqs (C) rqrs (D) srqr

38. Select the correct combination of mathematical signs to re-place * signs and to balance the given equation.
16 * 4 * 64 * 4
(A) ×, <, ÷ (B) ×, >, ÷ (C) ÷, >, × (D) ×, >, +

39. If FATHER is coded as FBTIES, what should be the code for the word 'SISTER' ?
(A) TJTUFS (B) SHSSEQ (C) SKSVET (D) SJSUES

40. In a certain code language, "PEN – TAN" is written as "0". How is "DEN – COB" written in that code language ?
(A) 8 (B) 3 (C) 9 (D) 7

41. Which number should replace the question mark (?) ?



(A) 9107 (B) 97 (C) 907 (D) 1097

42. Which number should replace the question mark (?) ?

341	**16**	**521**
613	**25**	**816**
452	**?**	**326**

(A) 27 (B) 22 (C) 30 (D) 41

43. If the first and second halves of the English alphabet are reversed, which letter will be 18th from the left ?
(A) H (B) S (C) R (D) Y

44. Pointing to a photograph, Amit said, "This person's sister's father is the father – in – law of my father's wife." How is the person in the photograph related to Amit ?
(A) Brother (B) Grandfather (C) Father or Uncle (D) Cousin

45. If '×' means 'addition', '–' means 'division', '÷' means 'subtraction' and '+' means 'multiplication', then which of the following equations is correct ?
(A) 16 + 5 – 10 × 4 ÷ 3 = 9 (B) 16 – 5 × 10 ÷ 4 + 3 = 12
(C) 16 + 5 ÷ 10 × 4 – 3 = 9 (D) 16 × 5 ÷ 10 ÷ 4 – 3 = 19

SECTION – E (Mathematics)

46. If a regular polygon has an interior angle that is 5 times its exterior angle, and a second regular polygon has an interior angle that is 4 times its exterior angle, find the difference between the number of sides of the two polygons.
(A) 2 (B) 3 (C) 4 (D) 5

47. In the given figure (assume mentally), line AB is parallel to CD. An angle bisector of angle BXT and DXY meet at P. If angle X = 110° ... Let's use clean numeric problems. Find the value of x if the supplement of an angle is 40 degrees less than three times its complement.
(A) 25° (B) 35° (C) 45° (D) 65°

48. In triangle ABC, AB = AC. A line through B intersects AC at D such that BD = BC. If angle ABD = 30°, find the measure of angle A.

(A) 30° (B) 40° (C) 50° (D) 20°

49. Two congruent triangles ABC and PQR are placed such that they overlap. If AB = PQ = 7 cm, BC = QR = 24 cm, and AC = PR = 25 cm. If the area of the overlapping region is exactly one – third of the area of triangle ABC, find the area of the non – overlapping region of triangle PQR.

(A) 28 cm² (B) 56 cm² (C) 42 cm² (D) 84 cm²

50. A rectangular grass plot 80 m by 60 m has two roads, each 10 m wide, running through its center, one parallel to the length and the other parallel to the breadth. Find the cost of gravelling the roads at Rs. 5 per square meter.

(A) Rs. 6500 (B) Rs. 7000 (C) Rs. 6000 (D) Rs. 5500

51. The length of a rectangle is increased by 25% and its breadth is decreased by 20%. What is the percentage change in its area ?

(A) 5% increase (B) 5% decrease (C) No change (D) 10% increase

52. Find the unit digit of the expression : $7^{2023} + 3^{2024} + 2^{2025}$.

(A) 2 (B) 4 (C) 6 (D) 8

53. How many integers between 1 and 1000 are divisible by 5 or 7 but not both ?

(A) 314 (B) 286 (C) 342 (D) 258

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

(A) 527 (B) 623 (C) 529 (D) 625

55. If $a^2 + b^2 + c^2 = ab + bc + ca$, then which of the following is always true ?

(A) $a = b = c$ (B) $a + b = c$ (C) $a^3 + b^3 = c^3$ (D) $a = b = -c$

56. Solve for : $3^{(x+2)} + 3^x = 90$.

(A) 2 (B) 3 (C) 4 (D) 1

57. The sum of three consecutive multiples of 7 is 777. Find the largest of these numbers.

(A) 252 (B) 259 (C) 266 (D) 273

58. If $2^x \times 3^y \times 5^z = 2160$, find the value of $3x + 2y - z$.

(A) 12 (B) 14 (C) 11 (D) 15

59. In a group of cows and chickens, the number of legs is 14 more than twice the number of heads. The number of cows is :

(A) 5 (B) 7 (C) 10 (D) 12

60. A wire in the shape of a circle of radius 21 cm is bent into the form of a square. Find the side of the square.

(A) 22 cm (B) 33 cm (C) 44 cm (D) 11 cm