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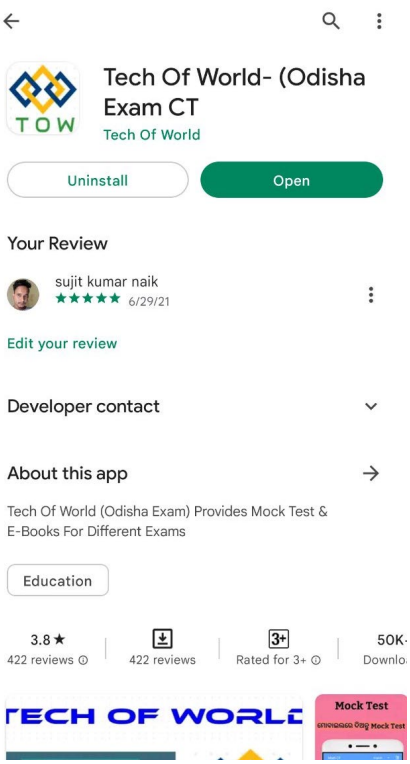

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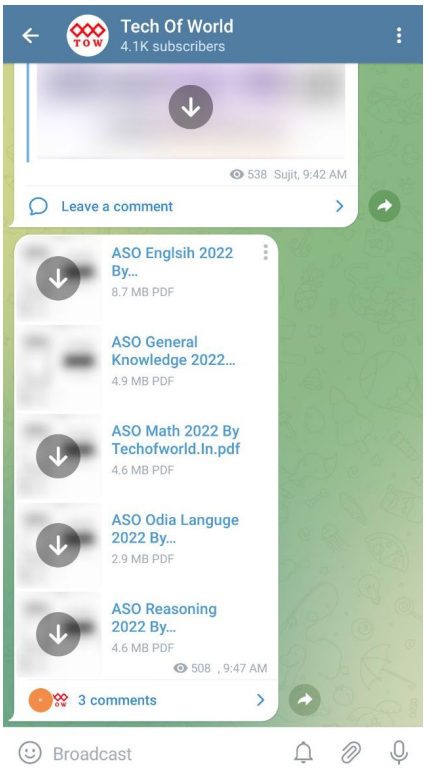

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Section 1 - Paperl-General English

Read the below passage and answer the questions that follows:

India is an amazing country because it is a melting pot of diverse cultures, languages, religions and ways of living. The strides made by the country in the social, political and economic areas are impressive and have made it a force to reckon with. The problems of eradicating illiteracy, removing poverty, tackling the issue of unemployment and over population need to be addressed. Every citizen of the country should be able to live a life of dignity. All divisions based on class, caste, colour or creed should be dissolved. India must become a super power not with its might, but by showing to the world the path that is right.

1) Which of the following is not mentioned as a problem that needs to be eradicated?

A) Pollution
B) Poverty
C) Illiteracy
D) Unemployment

2) How can India become a super power?

A) By showing military prowess
B) By showing the world the right path
C) By tackling unemployment
D) By excelling in the field of technology

3) As per the passage, what has India been described as?

A) A country with a glorious past
B) A country of many religions
C) A super power
D) A melting pot of diverse cultures

4) What has made India a force to reckon with?

A) Great strides in Space expeditions
B) Great strides in the social, political and economic areas
C) Great measures to control climate change
D) Great progress in Military power

5) What should be done to enable citizens to live a life of dignity?

A) Show respect to senior citizens
B) Remove divisions based on class and caste
C) Celebrate all religious festivals
D) Provide identity cards to all citizens

6) Choose the correct antonym of the underlined word in the given sentence. The hero was a brave man.

A) Strong
B) Generous
C) Coward
D) Happy

7) Choose the correct spelling of the word to be filled in the blank. The document that they submitted in the court was _____.

A) accepetable
B) acceptable
C) aceptable
D) accaptible

8) Choose the correct statement.

A) She backed off from city.
B) He had backed up his car when he saw the traffic.
C) When he saw the wild elephant going towards him he backed off.
D) The students backed down from their demands when they feared suspension.

9) Select the sentence with the correct usage of the phrasal verb.

A) He come forward in the line.
B) He came forward when his name was announced to receive the prize.
C) She come forward to finish the task.
D) They come down to play football.

10) Fill in the blank with an appropriate option.

It's a good idea, but it's .....that the boss will agree with you.

A) probably
B) sure
C) like
D) unlikely

Section 2 - PaperI-Education and General Awareness

11) A Committee was constituted for evolution of the New Education Policy (2016) that focusses on improving the quality of education and restoring the credibility of the education system in India, under the chairmanship of:

A) Daulat Singh Kothari
B) TST Subramanian
C) Lakshmanswami Mudaliar
D) Sevaram Sharma

---

12) Bleaching powder is formed by the action of which of the following elements?

A) Silver
B) Zinc
C) Copper
D) Chlorine

---

13) Which of the following bodies grants approval for starting new technical institutions, for introduction of new courses and for variation in intake capacity in technical institutions?

A) All India Council for Technical Education
B) Institute of Electrical and Electronics Engineers
C) Indian Institute of Science Education and Research
D) Central Advisory Board of Education

---

14) Which of the following parties formed the government in Karnataka after the elections in May 2018?

A) JD(S)-Congress alliance
B) JD(S)-BJP alliance
C) BJP
D) Congress

---

15) 'Padhe Bharat Badhe Bharat', launched in 2014 is a sub-programme of which of the following major schemes in India?

A) Jan Shikshan Sansthan
B) Sarva Shiksha Abhiyan
C) Rashtriya Madhyamik Shiksha Abhiyan
D) Saakshar Bharat Abhiyan

Section 3 - PaperI-Reasoning

16) 90% of **a** is equal to 70% of **b**. The value of (a/b)^2 is

A) 36 / 49
B) 64 / 81
C) 49 / 81
D) 25 / 36

---

17) What is the next term in the given series?

961, 900, 841, ?

A) 784
B) 821
C) 766
D) 832

---

18) If VINTAGE is coded as IVTNGAE, then SEVENTH will be coded as

A) ESEVTNH
B) ESEVTTN
C) ESEVTNG
D) ESEVTNE

---

19) Two numbers are such that, the sum of the squares of two numbers is 113 and their product is 56. Twice the sum of the two numbers is

A) 30
B) 46
C) 112
D) 56

---

20) Rani's mother's sister Pooja is Karthik's maternal aunt. Pooja has only one sister and no brother. How is Karthik related to Rani's father?

A) Daughter
B) Nephew
C) Son
D) Father

Section 4 - PaperI-Teaching Aptitude

21) Identify the reading disorder, which is characterized by trouble with reading although the person has normal intelligence. Problems may include difficulties in spelling words, reading quickly, writing words, "sounding out" words in the head, pronouncing words when reading aloud and understanding what one reads.

A) Dissociative identity disorder
B) Dyslexia
C) Schizoaffective disorder
D) Alexia

22) Which philosopher emphasized that the purpose of education was the discovery of the psychic self?

A) Dewey
B) Gautam Buddha
C) Aurobindo
D) Rousseau

23) A child in the class who is friendly with all the students and likes to interact with all without any prejudice may be called

A) Super smart
B) Hero
C) Star
D) Moon

24) Which method from the following is known as the one way channel of communication of information?

A) Discussion method
B) Problem solving method
C) Lecture method
D) Project method

25) Right to Education came into effect on

A) April 1, 2001
B) April 1, 2010
C) May 1, 2001
D) April 10, 2010

26) Each time the students performed well or answered correctly, the teacher gave them a reward in the form of praise. This way their performance improved gradually. The teacher was using the method of

A) positive reinforcement
B) neutral reinforcement
C) negative reinforcement
D) aggressive reinforcement

27) Psychology may be defined as

A) Study of the society
B) Study of the soul
C) Study of behaviour
D) Study of physical attributes

28) The concept of micro teaching was developed in

A) Princeton University
B) Oxford University
C) Cambridge University
D) Stanford University

29) When the pupil teacher is made to teach his/her own peers as if they were students, the training is called

A) skit
B) micro teaching
C) street play
D) simulation

30) Who said, " The art of education will never attain complete clearness in itself without philosophy."?

A) Dewey
B) Spencer
C) Gandhi
D) Fichte

Section 5 - PaperII-Physical Science

31) How the kinetic energy (E) of an electron is related to its De Broglie wavelength (λ)?

A) $E \propto \frac{1}{\lambda^2}$

B) $E \propto \frac{1}{\lambda}$

C) $E \propto \lambda^2$

D) $E \propto \lambda$

---

32) Which of the following produces a band spectrum when excited?

A) Na
B) H_2
C) Ne
D) He

---

33) In a compound microscope, the focal length of the eye piece is 5 cm and magnification is 30. If final image is formed at 25 cm, then the magnification produced by the object is

A) 10
B) 5
C) 1
D) 15

---

34) What is the chemical formula of Slaked lime?

A) CaO
B) NaOH
C) Na_2O
D) $Ca(OH)_2$

---

35) An extended version of the periodic table was developed by Glen Seaborg. In this he predicted the positions of elements up to atomic number:

A) 195
B) 107
C) 118
D) 168

---

36) The total number of orbitals associated with the principal quantum number, n = 3 is _____

A) 9
B) 1
C) 5
D) 3

---

37) The difference between successive Node and Antinode of a vibrating string is

A) λ/4
B) λ
C) 2λ
D) λ/2

---

38) What are the oxidation states of the two Cl atoms in bleaching powder?

A) +1; +1
B) -1; +1
C) -1; -1
D) 0; 0

---

39) Which of the following statements is FALSE in context to isotopes?

A) Isotopes have same atomic number Z but different mass number A
B) Isotopes possess different physical properties
C) Isotopes possess different chemical properties
D) ${}_1^1H; {}_1^2H; {}_1^3H$ are isotopies

---

40) Focal length of biconvex lens is

A) Both positive and negative
B) Zero

C) Positive
D) Negative

---

41) Cathode rays are stream of

A) electrons
B) photons
C) protons
D) neutrons

---

42) In the following reaction:

$PbO_2 + 4HCl = PbCl_2 + H_2O + Cl_2$

which is the oxidizing agent?

A) PbO_2
B) Both PbO_2 and HCl
C) HCl
D) Neither PbO_2 and HCl

---

43) What will be the resistance of a conductor at 0^0 C if the resistance of the same conductor is 5 ohms at 50^0C and 6 ohms at 100^0 C?

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

---

44) What is the oxidation state of oxygen in potassium superoxide?

A) +2

B) -1

C) $+\frac{1}{2}$

D) $-\frac{1}{2}$

---

45) If a body is falling freely under the action gravity alone in vacuum, then which of the following quantities remain constant during the fall, if air friction is neglected?

A) Total linear momentum
B) Potential energy
C) Kinetic Energy
D) Total mechanical energy

---

46) Find the molecular mass of a sucrose molecule. Given, mass of C = 12.011u, mass of H = 1.008u and mass of O = 16.00u

A) 180.162 u
B) 358.308 u
C) 342.308 u
D) 29.019 u

---

47) In a bar magnet, the ratio of magnetic length to geometrical length is nearly

A) 0.94
B) 0.80
C) 0.74
D) 0.84

---

48) Find the volume of air containing 21% oxygen by volume at STP required to convert 294 cm^3 of sulphur dioxide to sulphur trioxide under the same condition.

A) 200 cm^3
B) 700 cm^3
C) 500 cm^3
D) 100 cm^3

---

49) The mathematical formula representing Gay Lussac's law is

A) $P_1T_1 = P_2T_2$
B) $T_1 / V_1 = T_2 / V_2$
C) $P_1 / T_1 = P_2 / T_2$
D) $P_1V_1 = P_2V_2$

---

50) Which of the following orbital has the lowest energy?

A) 6p
B) 5d
C) 4f
D) 7s

Section 6 - PaperII-Biological Science

51) Which phylum does an Octopus belong to?

A) Annelida
B) Mollusca
C) Arthropoda
D) Coelenterata

---

52) The environment in which a species normally lives or the location of a living organism is referred as

A) habitat
B) community
C) predation
D) population

---

53) Which of the following is a function of Lysosomes?

A) Protein synthesis
B) Photosynthesis
C) Autophagy
D) Lipid synthesis

---

54) Which one of the following is the renewable sources of energy?

A) Petroleum
B) Nuclear fuel
C) Coal
D) Wind

---

55) Pyramid of biomass is upright in all ecosystem, EXCEPT

A) forest ecosystem
B) tree ecosystem
C) grassland ecosystem
D) aquatic ecosystem

---

56) Fuels has been classified based on their physical state of existence. Name the solid fuel from the following

A) Diesel
B) Agricultural waste
C) Kerosene oil
D) Petroleum gas

---

57) Dermis, Epidermis and Hypodermis are related to which of the following parts of the body?

A) Stomach
B) Skin
C) Intestine
D) Vocal Cord

---

58) During translation, ribosomes helps in

A) ATP synthesis
B) carbohydrate synthesis
C) protein synthesis
D) lipid synthesis

---

59) In Marine ecosystem, chemosynthetic sulfur bacteria are found in which of the following zones?

A) Benthic zone
B) Oceanic zone
C) Neritic zone
D) Abyssal zone

---

60) In Kreb's cycle there is oxidative decarboxylation of isocitrate to form alpha-ketoglutarate. This reaction is catalyzed by which of the following enzymes?

A) Succinate dehydrogenase
B) Isocitrate dehydrogenase
C) Isocitrate synthase
D) Aconitase

---

61) In aquatic biome, which of the following belongs to the marine biome?

A) Estuaries
B) Lake

C) River
D) Pond

---

62) Which of the following device can be used to measure the salinity of soil?

A) Refractometer
B) Hydrometer
C) Electrical conductivity meter
D) Calorimeter

---

63) If sodium bicarbonate is added in the water having Hydrilla plant in a beaker in presence of sunlight, which of the following process is accelerated?

A) ATP synthesis
B) Respiration
C) Photosynthesis
D) Transpiration

---

64) The principle mainly involved in the generation of biogas is

A) crystallization
B) fermentation
C) fractionation
D) aerobic digestion

---

65) The organs which have different basic structure and developmental origin but have similar appearance and perform similar functions is referred as

A) heterologous organs
B) homologous organs
C) analogous organs
D) vestigial organs

---

66) Which of the following based on the total amount of living material at each trophic level in the community?

A) Pyramid of biomass
B) Pyramid of energy
C) Pyramid of numbers
D) Pyramid of food

67) Which of the following is a type of white blood cell that engulfs and digests cellular debris, foreign substances in multicellular organisms?

A) Platelets
B) Neuronal cells
C) Erythrocytes
D) Macrophage

---

68) Which of the following statements is FALSE regarding renewable resources?

A) They contain resources which are pollution free
B) They are limited and will get exhausted one day
C) They can be recycled in environment by natural process
D) They are present in huge quantities

---

69) Which phylum of invertebrates is commonly called as flatworms?

A) Coelentrata
B) Nematodes
C) Platyhelminthes
D) Porifera

---

70) What is the tube like structure in annelids, which acts to function as its excretory system?

A) Green gland
B) Flame cells
C) Kidney
D) Nephridia

Section 7 - PaperII-Mathematics

71) The shortest distance between any two points is

A) a plane
B) a line segment
C) an arc
D) a ray

---

72) Five years ago, Amrit was thrice as old as Barkha and ten years later, Amrit will be twice as old as Barkha. What is the present age (in years) of Amrit?

A) 50
B) 40
C) 20
D) 60

---

73) If $\cos^2 a + \cos^4 a = 1$, then the value of $(\tan^2 a + \tan^4 a)/(\sec^2 a \tan^2 a)$ is

A) 3
B) 1
C) -1
D) 2

---

74) If x:y = 1:3, then the ratio $(7x^2+3xy):(2xy+y^2)$ is

A) 16 : 7
B) 16 : 15
C) 16 : 5
D) 10 : 3

---

75) The number system which contains only 8 different digits 0, 1, 2, 3, 4, 5, 6 and 7 is called

A) quinary system
B) octal system
C) hexadecimal system
D) binary system

---

76) Logarithm of 7 to the base 2 is

A) an irrational number
B) an integer
C) a rational number
D) a prime number

---

77) In a class of 50 students 25 students can play hockey and 35 can play cricket. How many can play hockey and cricket both?

A) 25
B) 20
C) 15
D) 10

---

78) If $\cos \Theta = 1/\sqrt{2}$, then $\cos^2\Theta - \sin^2\Theta =$

A) $\sqrt{3}/2$
B) 0
C) 1/2
D) 1

---

79) If α and β are the roots of $x^2 - 2x + 3 = 0$, then the equation with roots $\alpha+2$, $\beta+2$ is

A) $x^2 + 6x - 11 = 0$
B) $x^2 - 11x + 6 = 0$
C) $x^2 - 6x + 11 = 0$
D) $x^2 + 11x - 6 = 0$

---

80) The number of proper subsets of a set of order three is

A) 4
B) 6
C) 7
D) 8

---

81) If the simultaneous equations are given as $13x - 6y = 20$, $7x + 4y = 18$, then the values of x, y are respectively

A) 2, 4
B) 1, 2
C) 6, 1
D) 2, 1

82) If $a^x = b$, $b^y = c$ and $c^z = a$, then the value of xyz is

A) 2
B) 1
C) 3
D) 0

---

83) Consider a right angle triangle PQR right-angled at Q. If PQ is 27 cm and QR is $27\sqrt{3}$ cm, then the angle P is

A) 60°
B) 75°
C) 45°
D) 30°

---

84) If log 2 = 0.30103, the number of digits in 2^{64} is

A) 21
B) 18
C) 19
D) 20

---

85) In ΔABC, two points D and E are taken on the lines AB and BC respectively in such a way that AC is parallel to DE. If BC = 9 cm, DE = 4 cm, AC = 12 cm, then EC =

A) 12 cm
B) 6 cm
C) 9 cm
D) 3 cm

---

86) A sum of money is to be distributed among four people Arun, Barun, Chetan, Dinesh in the proportion of 5 : 2 : 4 : 3. If Chetan gets Rs. 1000 more than Dinesh, what is Barun's share?

A) Rs. 500
B) Rs. 1500
C) Rs. 2000
D) Rs. 2500

---

87) The distance between the foot of a light house and a certain point is 30 m. If the angle of elevation from that point to the top of the lighthouse is 60°, then the height of the pole is

A) 46.20 m
B) 66.52 m
C) 51.96 m
D) 85.23 m

---

88) If log 8 = 0.9030 and log 9 = 0.9542, the value of $\log_5 512$ is

A) 2.87
B) 2.967
C) 3.876
D) 3.912

---

89) If the monthly pay of salesman is 'y' which includes basic pay of $200 plus a commission of $5 for every unit he sales, then the function for this can be written as

A) x = 205 + 5y
B) y = 205 + x
C) y = 200 + 5x
D) 200 + 5xy

---

90) If a bicycle wheel has 48 spokes, then the angle between any two alternate spokes is

A) 16°
B) 7.5°
C) 9.6°
D) 15°

Question Paper No:	46992_50

Answer Key

1.	A	31.	A	61.	A
2.	B	32.	B	62.	C
3.	D	33.	B	63.	C
4.	B	34.	D	64.	B
5.	B	35.	D	65.	C
6.	C	36.	A	66.	A
7.	B	37.	A	67.	D
8.	D	38.	B	68.	B
9.	B	39.	C	69.	C
10.	D	40.	C	70.	D
11.	B	41.	A	71.	B
12.	D	42.	A	72.	A
13.	A	43.	B	73.	B
14.	A	44.	D	74.	B
15.	B	45.	D	75.	B
16.	C	46.	C	76.	A
17.	A	47.	D	77.	D
18.	A	48.	B	78.	B
19.	A	49.	C	79.	C
20.	C	50.	C	80.	C
21.	B	51.	B	81.	D
22.	C	52.	A	82.	B
23.	C	53.	C	83.	A
24.	C	54.	D	84.	D
25.	B	55.	D	85.	B
26.	A	56.	B	86.	C
27.	C	57.	B	87.	C
28.	D	58.	C	88.	C
29.	D	59.	D	89.	C
30.	D	60.	B	90.	D