Section 1 - PaperI-English Language

1) Find the most appropriate opposite meaning word: VICTORIOUS

A) Efficacious
B) Defeated
C) Fortuitous
D) Annexed

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2) Select the correct plural form from the given options.

The _____ are on television for the first time.

A) mens
B) mans
C) men
D) men's

Read the passage and answer the questions that follow:

In the US, potatoes have become one of the most widely consumed crops and thus have a variety of preparation methods and condiments. French fries and often hash browns are commonly found in typical American fast-food burger "joints" and cafeterias. One popular favorite involves a baked potato with cheddar cheese (or sour cream and chives) on top, and in New England "smashed potatoes" (a chunkier variation on mashed potatoes, retaining the peel) have great popularity. Potato flakes are popular as an instant variety of mashed potatoes, which reconstitute into mashed potatoes by adding water, with butter or oil and salt to taste. A regional dish of Central New York, salt potatoes are bite-size new potatoes boiled in water saturated with salt then served with melted butter. At more formal dinners, a common practice includes taking small red potatoes, slicing them, and roasting them in an iron skillet. Among American Jews, the practice of eating latkes (fried potato pancakes) is common during the festival of Hanukkah. A traditional Acadian dish from New Brunswick is known as poutine râpée. The Acadian poutine is a ball of grated and mashed potato, salted, sometimes filled with pork in the centre, and boiled. The result is a moist ball about the size of a baseball. It is commonly eaten with salt and pepper or brown sugar. It is believed to have originated from the German Klöße, prepared by early German settlers who lived among the Acadians. Poutine, by contrast, is a hearty serving of French fries, fresh cheese curds and hot gravy. Tracing its origins to Quebec in the 1950s, it has become a widespread and popular dish throughout Canada. Potato grading for Idaho potatoes is performed and rated as higher or lower in quality due to their appearance (e.g. blemishes or bruises, pointy ends). Potato density assessment can be performed by floating them in brines.

High-density potatoes are desirable in the production of dehydrated mashed potatoes, potato crisps and French fries.

3) Smashed potatoes are

A) a chunkier version of mashed potatoes
B) smashed small red potatoes
C) mashed potatoes of France
D) mashed potatoes with butter and salt

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4) Regional dish where bite-sized new potatoes boiled in water, saturated with salt, and then served with melted butter is from

A) Central New York
B) Germany
C) France
D) New England

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5) American Jews during the festival of Hanukkah eat:

A) fried potato pancakes
B) smashed potatoes
C) potato fries
D) potato flakes

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6) Poutine is an original dish of

A) Quebec
B) New Brunswick
C) Klobe
D) Acadia

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7) The density of the potato can be checked by

A) floating them in brines
B) using them in the production of dehydrated mashed potatoes
C) roasting them in an iron skillet
D) their pointy ended appearance

8) Find the most appropriate opposite meaning word:
EXTRAVAGANCE

 A) Poverty
 B) Luxury
 C) Economical
 D) Cheapness

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9) Select the right form of verb from the given options.

He often _____ to the cinema because he loves watching movies.

 A) will go
 B) would go
 C) goes
 D) go

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10) Select the correct option.

I have got _____ umbrella with me.

 A) no article
 B) a
 C) an
 D) the

Section 2 - PaperI-Education and General Awareness

11) For which stage of education did the New Educational Policy, 1986 recommend vocationalization of education?

A) Elementary
B) Higher
C) Secondary
D) Primary

12) Which of the following commission recommended, 'the introduction of Education as an optional subject at the Graduation and P.G. level'?

A) Secondary Education Commission (1952-53)
B) University Education Commission (1948-49)
C) Education Commission (1964-66)
D) Calcutta University Commission (1917-19)

13) Which of the following features of the Indian Constitution are borrowed from the Australian Constitution?

A) Concept of the Concurrent List
B) Concept of Written Constitution
C) Concept of Supreme Court
D) Concept of Lok Sabha

14) The blue colour of the clear sky is due to which of the following optical phenomena?

A) Total Internal Reflection of light
B) Dispersion of light
C) Distortion of light
D) Scattering of light

15) Which of the following is CORRECT full form of acronym S.C.E.R.T?

A) Standard Council of Educational Research and Training
B) State Council of Educational Research and Teachers
C) State Committee of Educational Research and Training
D) State Council of Educational Research and Training

Section 3 - PaperI-Reasoning

16) Instruction: In the following questions mark:

1, if the question can be answered with the help of statement I alone.

2, if the question can be answered with the help of statement II alone.

3, if the question can be answered with the help of both I and II.

4, if the question can't be answered at all.

If a x b = 30, then what is the value of a?

Statement I : b is an even prime number

Statement II : a is an integer

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

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17) In a code language, CREATION is coded as ATCCRKMP. How will CORPORATION be coded as in the same code language?

A) AQPRMPYVGQL
B) EMTNQTCRKMP
C) EMTNQPCRKMP
D) AQPRMTYVGQL

18) Instruction: Below mentioned are statements followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.
Statements:
Some hoodies are shirts.
Some shirts are trousers.
All the trousers are caps.

Conclusions:
I) Some caps are shirts.
I) Some trousers are hoodies.
III) No trouser is hoodie.
IV) Some shirts are hoodies.

A) Only II and III follow
B) Only II and IV follow
C) Only I and II follow
D) Only I, IV and either II or III follows

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19) Instruction: Below mentioned are statements followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements:
All donkeys are horses.
All zebras are horses.

Conclusions:
I) All donkeys are zebras
II) Some zebras are donkeys

A) None of the conclusions follow
B) Only I follows
C) Only II follows
D) Both I and II follow

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20) What is 20% of 30% of 250?

A) 100
B) 15
C) 150
D) 20

Section 4 - PaperI-Teaching Aptitude

21) Which of the following is the institute of People's Education focusing on the poor, the illiterates, the neo-literates, the underprivileged and the un-reached by providing skill development and linking literacy with vocational skills and provide large doses of Life Enrichment Education (LEE) to the people of India?

A) Vocational Education Centre
B) Margdarshak Centre
C) Adult Education Centre
D) Jan Shikshan Sansthan

22) Four existing schemes, ICT in school, Girls hostel scheme, IEDSS, Vocational Education, were merged into which of the following Education programmes in 2013-14?

A) District Primary Education Program
B) Universal Primary Education Program
C) Rashtriya Madhyamik Shiksha Abhiyan
D) Sarva Shiksha Abhiyan

23) Which of the following steps was initiated towards the aim of bringing education into closer relationship with productivity?

A) The introduction of physical education in the school curriculum
B) The inclusion social and national service as an integral part of school education
C) The introduction of vocational education in the school curriculum
D) The introduction of moral, social and spiritual values as an integral part of school education

24) ADHD is a complex disorder, which can be seen as a disorder of life time, developing in preschool years. What does ADHD stand for?

A) Acute diversion hyperactivity disorder
B) Attention deficit hyperactivity disorder
C) Acute deficit hyperactivity disorder
D) Attention diversion hyperactivity disorder

25) In a classroom environment, which of the following terms means 'to gossip idly'?

A) Tattling
B) Informal communication
C) Chit-chat
D) Non-formal communication

26) What was the main objective for the creation of Bloom's Taxonomy?

A) To promote higher forms of thinking in Education such as analysing and evaluating concepts
B) To help students understand the environment and work towards the betterment of the same
C) To create awareness regarding changing ways of teaching as per the learners' needs
D) To enable the learners understand the sustainable education and its importance

27) What was the reason for the suggestion of internship model for teacher training?

A) The internship model is determinedly based upon the virtual field experience in a virtual situation, on the development of teaching skills by practice over a period of time.
B) The internship model is determinedly based upon the artificial field experience in a virtual situation, on the development of teaching skills by practice over a period of time.
C) The internship model is based upon the artificial field experience in a virtual situation, on the development of teaching skills by practice for a short time.
D) The internship model is based upon the primary value of actual field experience in a realistic situation, on the development of teaching skills by practice over a period of time.

28) Which of the following options is a practice that fosters discipline in students in a classroom environment?

A) Do not give any assignments to the misbehaving student
B) Praise and encourage good behavior
C) Isolate the student
D) Criticize the misbehaving student in the class

29) Which of the following organizations, established by the Government of India in 1956, initiated a Directorate of Adult Education?

A) The National Fundamental Education Centre (NFEC)
B) National Council of Educational Research and Training (NCERT)
C) University Grants Commission (UGC)
D) Foundation for Higher Education Centre (FHEC)

30) Bloom's Taxonomy was created under the leadership of which of the following scholars?

A) Dr. Benjamin Samuel
B) Albert Bandura
C) Dr. John Dewey
D) Howard Gardner

Section 5 - PaperII-Physical Science

31) If an observer is moving away from a stationary source of sound with a velocity 1/5th of the velocity of sound, the percentage decrease in the apparent frequency is

A) 25%
B) 80%
C) 20%
D) 17%

32) Particle 1 collides with a stationary particle 2 head on elastically. What is their mass ratio if after collision they move in opposite directions with equal velocities?

A) 3/4
B) 5/6
C) 1/3
D) 2/3

33) Psi is the abbreviation of pound per square inch, and is widely used in British and American unit of measure for pressure. One Psi =

A) 6.895×10^9 Pascal
B) 68.95×10^6 Pascal
C) 6.895×10^3 Pascal
D) 6.895×10^{-3} Pascal

34) What is the potential due to a charge (q) at its own location?

A) q
B) 0
C) Infinite
D) 1/q

35) What is the basis of arranging chemical elements in a modern periodic table?

A) Neutron number
B) Mass number
C) Atomic number
D) Atomic weight

36) If a saline solution (0.9% m/V NaCl) with higher NaCl content is introduced into a person's body, then his blood cells will

A) coagulate
B) remain unchanged
C) shrink
D) swell

37) Light transmits through an optical fibre using the principle of

A) Total internal reflection
B) Refraction
C) Interference
D) Diffraction

38) A 500-kg communications satellite is in a circular geosynchronous orbit and completes one revolution about the earth in 24 hours at an altitude of 36300 km above the surface of the earth. Find the kinetic energy of the satellite. (Radius of the earth is 6400 km)

A) 24 MJ
B) 2.4 GJ
C) 1.7 GJ
D) 54 MJ

39) Acidic dehydration of ethyl alcohol leads to the formation of

A) Acetylene
B) Ethane
C) Ethene
D) Methane

40) To which of the following blocks do gold and silver belong?

A) f - block
B) s - block
C) p - block
D) d - block

41) A resistance of 20 ohms and one of 80 ohms are arranged in series across 220 volt supply. What will be the heat in joules produced by this combination in 10 minutes?

A) 48400 J
B) 22000 J
C) 290400 J
D) 4840 J

42) An electron - positron pair at rest is annihilated into two gamma photons of equal energy. What is the energy of each photon?

A) 0.256 MeV
B) 0.511 MeV
C) 2.04 MeV
D) 1.02 MeV

43) Which among the following is TRUE for Degaussing?

A) Degaussing is the process of removal of magnetic impurities
B) Degaussing is the process of demagnetising metallic parts
C) Degaussing is the process of removing gases from the materials
D) Degaussing is the process of remagnetising metallic parts

44) The electronic configuration of an iron atom is

A) $1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,4s^2$
B) $1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,3d^6$
C) $1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,3d^6\,4s^2$
D) $1s^2\,2s^2\,2p^6\,3s^2\,3p^6\,3d^8$

45) In a chemical reaction, $2NO(g) + O_2(g) \rightarrow 2NO_2\,(g)$, if the concentration of O_2 is doubled what happens to the rate of the reaction?

A) Reaction rate gets quadrupled
B) Reaction rate decreases to half
C) Reaction rate gets doubled
D) Reaction rate decreases to one-fourth

46) Two 50 W electric bulbs are lit for 6 hours, and three 200 W bulbs for 10 hours every day. The electric energy consumed in 60 days is

A) 1425600 KJ
B) 712800 KJ
C) 712800000 J
D) 1425600 J

47) When a liquid crystallizes into a solid, its entropy

A) remains constant
B) decreases
C) increases
D) becomes infinite

48) If two coherent sources of intensity ratio 36/25 interfere to produce interference patterns, then the ratio of the minimum intensity to maximum intensity of the pattern is

A) 11/61
B) 1/11
C) 121/3721
D) 1/121

49) What should be the specific heat of the body if a body with mass 2 kg absorbs heat of 100 calories when its temperature raises from 30°C to 80°C?

A) 10^{-6} cal/gr °C
B) 10^{-2} cal/gr °C
C) 10^{-8} cal/gr °C
D) 10^{-3} cal/gr °C

50) A water droplet of radius 10^{-7} m is charged with one electron charge. What is the minimum electric field required to keep it suspended? (Given, Density of water = 10^3 kg/m^3, Electron Charge = $1.6 * 10^{-19}$ C)

A) 256.6 V/m
B) 0.6125 V/m
C) 0.2566 V/m
D) 612.5 V/m

Section 6 - PaperII-Biological Science

51) A water body which has a relatively limited growth of algae consequently leads to the low nutrient content in the lake is termed as

A) Mesotrophic
B) Hypereutrophic
C) Eutrophic
D) Oligotrophic

52) Soil erosion can be prevented by which of the following methods?

A) Overgrazing of animals
B) Deforestation
C) Afforestation
D) Excessive use of fertiliser

53) Which one of the following is an inexhaustible natural resource?

A) Petroleum
B) Coal
C) Minerals
D) Sunlight

54) Which of the following phylum contains the animals which are pseudocoelomates?

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

55) Cryptochromes which are photoreceptors found in plants, can sense which of the following colours of light?

A) Red
B) Yellow
C) Blue
D) Green

56) Which of the following cell organelle contains the reducing enzyme catalase and oxidase?

A) Centrosome
B) Golgi apparatus
C) Ribosome
D) Peroxisome

57) A community of plants and animals that have common characteristics for the environment they exist in, is referred as

A) biome
B) biomass
C) bioaccumulation
D) biogas

58) Which of the following soil is formed by deposition of silt brought down by the rivers?

A) Black soil
B) Red soil
C) Alluvial soil
D) Laterite soil

59) Which of the following cell organelles plays a major role in post translational modification of proteins and lipids?

A) Chloroplast
B) Mitochondria
C) Lysosome
D) Golgi complex

60) In angiosperms, the arrangement of ovules within the ovary is known as

A) integuments
B) placentation
C) hilum
D) funicle

61) During evolution, the specialized form of amniotic eggs evolved in which of the following phylum?

A) Annelida
B) Cnidaria
C) Mollusca
D) Vertebrata

62) Which of the following products or services are obtained from natural resource called plants?

A) Tar
B) Paper
C) Solar power
D) Paraffin wax

63) Which of the following denotes the characteristics of Bryophyta division?

A) The plants develops a number of hair-like structures known as rhizoids
B) The xylem and phloem tissue helps in conduction of water and other substances from one part of plant body to another
C) They posses well developed vascular tissues
D) The body of plant is in the form of an undivided thallus

64) In flowering plants, the outermost layer of microsporangium in an anther is

A) epidermis
B) middle layer
C) tapetum
D) endothecium

65) Which of the following is NOT a function of lysosomes?

A) Intracellular digestion
B) Programmed destruction
C) Autophagy
D) Modification of proteins

66) Which of the following phylum exhibits blind sac body plan and radial symmetry?

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

67) Which of the following cell organelles has its own genetic material?

A) Vacuole
B) Mitochondria
C) Lysosomes
D) Peroxisomes

68) What is the role of decomposer in the ecosystem?

A) photosynthesis
B) kills other animal for food
C) absorb nutrients from dead tissue
D) make its own food

69) Which of the following is NOT a cause of deforestation?

A) Industrialization
B) Overgrazing
C) Mining
D) Silviculture

70) In a human graafian follicle, a thick area that surrounds the secondary oocyte is termed as

A) corona radiata
B) zona pellucida
C) antrum
D) corpus luteum

Section 7 - PaperII-Mathematics

71) If cos θ cosec 25° = 1, then the value of θ is

A) 70°
B) 60°
C) 65°
D) 75°

72) The angles of a triangle are $(x + 6)°$, $(2x - 3)°$ and $(3x + 3)°$. The value of 'x' is

A) 29
B) 31
C) 30
D) 27

73) The value of $\log_3 27$ is

A) 1
B) 0
C) 9
D) 3

74) What is the digit in the units place of the resultant value of the product 81 × 82 × 83 × .... × 89?

A) 8
B) 0
C) 9
D) 2

75) The point of intersection of the angle bisectors of a triangle is called

A) incentre
B) orthocentre
C) centroid
D) circumcentre

76) The expression $(x^2 - 25)/(5x - x^2)$ is equivalent to

A) $(- x - 5)/x$
B) $(x + 5)/ (x - 5)$
C) $(x + 5)$
D) $(- x + 5)/x$

77) What is the domain of the relation R = {(8, 10), (5, 7), (9, -11), (6, -8)}?

A) {-11, -8, 7, 10}
B) {5, 6, 9, 10}
C) {-8, 7, 9, 10}
D) {5, 6, 8, 9}

78) If sin 7θ = cos 20° (0° < θ < 90°), then the value of θ is

A) 30°
B) 10°
C) 45°
D) 20°

79) If $a : b = b : c$, then $a^4 : b^4$ =

A) $a^2 : c^2$
B) $c^2 : a$
C) $ac : b^2$
D) $b : ac$

80) If the two angles of a triangle are complementary, then the third angle of the triangle is

A) 36°
B) 60°
C) 90°
D) 45°

81) Which of the following relations denoted by R on set {1, 2, 3} is NOT transitive?

A) R = {(1, 1), (2, 3), (3, 1), (2, 2), (1, 2), (3, 3)}
B) R = {(1, 2), (2, 2)}
C) R = {(1, 1), (1, 2), (2, 1), (2, 2)}
D) R = {(1, 1), (2, 2), (3, 3), (1, 2), (2, 3), (1, 3)}

82) If $(\sin \theta + \cos \theta)/(\sin\theta - \cos \theta) = 3/2$, then the value of $\tan \theta$ =

A) 7
B) 5
C) 2
D) 1

83) The value of $8^{-2/3} \times (1/4)^{-2}$ is

A) 2
B) 4
C) 1
D) 8

84) The value of $1 - 2 \sin \theta + \sin^2 \theta$ =

A) $\tan \theta$
B) $\cos^2 \theta$
C) $\sin \theta$
D) $(1 - \sin \theta)^2$

85) What is the number that can be added to each of the numbers 6, 7, 15 and 17 so that the resulting numbers become proportional?

A) 3
B) 4
C) 5
D) 2

86) For the two sets A = {a, b, c}, B = {0, 1, 2, 3}, which of the following sets of ordered pairs represents function from A to B?

A) {(c, 0), (b, 0), (c, 3)}
B) {(1, a), (0, a), (2, c), (3, b)}
C) {(a, 1), (c, 2), (c, 3), (b, 3)}
D) {(a, 1), (b, 2), (c, 3)}

87) Taking 'y' as a variable and 'k' as a constant, if the equation 2y + k = 0 has the root -3, then the value of k is

A) 4
B) -6
C) 6
D) 3

88) If $x = y^a$, $y = z^b$ and $z = x^c$, then what is the value of abc?

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

89) If log 2 = 0.3010303, then the number of digits in 2^{50} is

A) 23
B) 18
C) 14
D) 16

90) If sum of the age of a person before 4 years and the age after 8 years is 44, what is his present age?

A) 12 years
B) 18 years
C) 22 years
D) 20 years

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Answer Key	

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