SCHOOL OF BIO	LOGICAL SCIENCES
BIORI	ESOURCES
Total Questions : 60 Time Allowed : 70 Minutes	Question Booklet Series A Roll No. :
Instruction 1. Write your Entrance Test Roll Number in the and fill up the necessary information in the spa	s for Candidates : e space provided at the top of this page of Question Booklet aces provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and entries in the Original Copy, candidate shoul entries made in the Original Copy against each	a Candidate's Copy glued beneath it at the top. While making d ensure that the two copies are aligned properly so that the item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, includin only.	g answers to questions, are to be recorded in the Original Copy
4. Choose the correct / most appropriate respondent darken the circle of the appropriate response read by the OMR Scanner and no complaint to	nse for each question among the options A, B, C and D and completely. The incomplete darkened circle is not correctly o this effect shall be entertained.
5. Use only blue/black ball point pen to darken gel/ink pen or pencil should be used.	the circle of correct/most appropriate response. In no case
6. Do not darken more than one circle of option response shall be considered wrong.	s for any question. A question with more than one darkened
7. There will be ' Negative Marking ' for wrong 0.25 marks from the total score of the candidate	g answers. Each wrong answer will lead to the deduction of te.
8. Only those candidates who would obtain posi admission.	tive score in Entrance Test Examination shall be eligible for
9. Do not make any stray mark on the OMR she	et.
10. Calculators and mobiles shall not be permitted	inside the examination hall.
11. Rough work, if any, should be done on the blan	nk sheets provided with the question booklet.
12. OMR Answer Sheet must be handled carefully a be evaluated.	and it should not be folded or mutilated in which case it will not
13. Ensure that your OMR Answer Sheet has been	signed by the Invigilator and the candidate himself/herself.
14. At the end of the examination, hand over the O original OMR sheet in presence of the Candid	MR Answer Sheet to the invigilator who will first tear off the ate and hand over the Candidate's Copy to the candidate.

- In which year the International Union for the 5. Conservation of Nature and Natural Resources (IUCN) was established?
 - (A) 1944
 - (B) 1948
 - (C) 1952
 - (D) 1956
- 2. According to biological species concept, species are groups of potentially interbreeding natural populations that are:
 - (A) Reproductively isolated
 - (B) Geographically isolated
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 3. Who among the following proposed 'Universal' model 7. for energy flow?
 - (A) Evans
 - (B) Linnaeus
 - (C) Odum
 - (D) Gilbert
- 4. A broadscale distribution of world vegetation and associated animals with a distinct ecological community of plants and animals living together in a particular climate is termed as :
 - (A) Biome
 - (B) Taiga biome
 - (C) Tundra biome
 - (D) Desert biome
- SP-4493-A

In which year, Vavilov first published his concept of centres of origin of cultivated plants?

- (A) 1916
- (B) 1922
- (C) 1926
- (D) 1930

6.

What is name of a commercial drug, that has a major ingredient of *Arnebiabenthamii*, with antifungal, antibacterial, anti-inflammatory and wound-healing properties?

- (A) Atropine
- (B) Gaozaban
- (C) Morphine
- (D) Digoxin
- The scientific name of common dandelion is :
- (A) Malva sylvestris
- (B) Cichorium intybus
- (C) Taraxacum officinale
- (D) Atropa acuminata
- 8. Jute is a bast fibre that is harvested from the plant :
 - (A) Corchorus capsularis
 - (B) Boehmeria nivea
 - (C) Cannabis sativa
 - (D) Linum usitatissimum
- 9. The scientific name of rainbow trout is:
 - (A) Salmo platycephalus
 - (B) Salvelinus fontinalis
 - (C) Salmo trutta
 - (D) Oncorhynchus mykiss

Which of the following is a fungal disease of honey 15. In which year, Alexander Fleming was awarded 0. (A) Sac brood disease

- (B) Chalkbrood disease
- (C) Nosema disease
- (D) American foul brood
- Which of the following is not a viral disease of 16. 1.
 - (A) Grasserie
 - (B) Cytoplasmic polyhedrosis
 - (C) Pebrine
 - (D) Gattine
- To explain the basis of heterosis, who among the 12. following proposed overdominance hypothesis?
 - (A) Shull and East
 - (B) Jones
 - (C) Fisher
 - (D) Mather
- 13. SCP stands for :
 - (A) Single cell protein
 - (B) Singel cell polysaccharide
 - (C) Single cell polystyrene
 - (D) Somatic cell proliferation
- 14. Which of the following is not a cheese producing microbe?
 - (A) Streptococcus lactis
 - (B) Penicillum candidum
 - (C) Brevibacterium linens
 - (D) Beauveria bassiana

Nobel Prize for his study on antibiotics?

- (A) 1930
- (B) 1945
- (C) 1950
- (D) 1962

Saccharomyces carlsbergensis is used to prepare :

- (A) Cheese
- (B) Beer
- (C) Antibiotics
- (D) Bread

Enthalpy, the heat content of the reacting system, is 17. represented by :

- (A) H = U PW
- (B) H = U + PW
- (C) H U PV
- (D) H = U + PV
- 18. According to first law of thermodynamics :
 - (A) Energy can be created but not destroyed
 - (B) Energy can be created and destroyed
 - (C) Energy can neither be created nor destroyed
 - (D) None of the above
- Which of the following is true for pH? 19.
 - (A) $pH = -\log[H+]$
 - (B) $pH = \log \frac{1}{[H+1]}$
 - (C) $pH = \log [H+]$
 - (D) Both (A) and (B)

SP-4493-A

- 20. Buffers are mixtures of :
 - (A) Weak acids and their conjugate bases
 - (B) Strong acids and their conjugate bases
 - (C) Weak alkaloids and their conjugate bases
 - (D) Strong alkaloids and their conjugate bases
- 21. The statement "*omnis cellula e cellula*" was proposed by :
 - (A) Robert Hooke
 - (B) Anton van Leeuwenhoek
 - (C) Rudolf Virchow
 - (D) Schleiden and Schwann
- 22. In which year, Jonathan Singer and Garth Nicolson proposed fluid-mosaic model of plasma membrane? 27.
 - (A) 1970
 - (B) 1972
 - (C) 1974
 - (D) 1976
- 23. Which of the following was earlier known as GERL (Golgi complex-ER-lysosome)?
 - (A) trans-Golgi network
 - (B) cis-Golgi network
 - (C) Endoplasmic reticulum
 - (D) Lysosomes
- 24. The period between the end of mitosis phase and the start of DNA replication is called as :
 - (A) G1 phase
 - (B) G2 phase
 - (C) S phase
 - (D) None of the above

SP-4493-A

- 25. The zona pellucida of most mammalian eggs is composed mainly of :
 - (A) ZP1 glycoproteins
 - (B) ZP2 glycoproteins
 - (C) ZP3 glycoproteins
 - (D) All of the above
- 26. Which of the following is most appropriate for extraembryonic membranes?
 - (A) Amnion, chorion
 - (B) Yolk sac, allantois
 - (C) Amnion, chorion, yolk sac
 - (D) Amnion, chorion, yolk sac, allantois
 - Pollination in which the pollen from the anthers of one flower are transferred to the stigma of another flower borne on the same plant is termed as :
 - (A) Cleistogamy
 - (B) Homogamy
 - (C) Geitonogamy
 - (D) Xenogamy
 - 28. The development of reproductive propagules without meiosis and syngamy is called as :
 - (A) Porogamy
 - (B) Mesogamy
 - (C) Apomixis
 - (D) Siphonogamy
 - 29. In which plant, Frits Went discovered Auxin hormone?
 - (A) Avena sativa
 - (B) Triticum aestivum
 - (C) Brassica oleracea var. botrytis
 - (D) Solanum tuberosum
- 4





30.

The downward curvature of leaves that occurs when 35. the upper (adaxial) side grows faster than the lower

- (A) Thermonasty
- (B) Epinasty
- (C) Nyctinasty
- (D) Thigmonastv
- 31. Which of the following is not true for innate immune
 - (A) Antigen specific
 - (B) Rapid response
 - (C) Limited diversity
 - (D) Found both in vertebrates and invertebrates
- 32. The only class of immunoglobulins that passes through the placenta and enabling the mother to transfer her immunity to the foetus is :
 - (A) IgG
 - (B) IgA
 - (C) IgM
 - (D) IgE
- 33. In photosynthesis, light independent process is also called as :
 - (A) Carbon fixation
 - (B) Calvin Benson cycle
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 34. Hatch-Slack pathway is also known as :
 - (A) C_3 cycle
 - (B) C_4 cycle
 - (C) CAM pathway
 - (D) None of the above

SP-4493-A

- Who discovered urea cycle?
- (A) Krebs and Henseleit
- (B) Friedrich Wohler
- (C) Antoine Lavoisier
- (D) James Sumner
- 36. Glycolytic pathway, also known as Embden-Meyerhof pathway, is an example of :
 - (A) Anaerobic fermentation
 - (B) Aerobic fermentation
 - (C) Phosphorylation
 - (D) None of the above
- 37. Choose the correct empirical formula of monosaccharides:
 - (A) (CHO)_
 - (B) (CH,O)
 - (C) (CH₃O)
 - (D) $(CH_4O)_n$
- 38. GAG stands for:

5

- (A) Glycoacetoglycans
- (B) Glycoacylglycans
- (C) Glycoamineglycans
- (D) Glycosaminoglycans
- 39. Choose the correct statement for saturated fatty acids:
 - (A) Linear chains of CH, groups linked by carboncarbon double bonds
 - (B) Linear chains of CH groups linked by carboncarbon single bonds
 - (C) Linear chains of CH_4 groups linked by carboncarbon single bonds
 - (D) Linear chains of CH, groups linked by carboncarbon single bonds

- 40. Who introduced the term "Sphingolipids"?
 - (A) Herbert Carter
 - (B) Michael Garbriel
 - (C) Dietrich Stephan
 - (D) Adam Gilbert
- 41. Which one among the following is the first amino acid that was discovered?
 - (A) Glycine
 - (B) Alanine
 - (C) Asparagine
 - (D) Lysine
- 42. In which year, Linus Pauling and Robert Corey proposed two structures namely α helix and β pleated sheets of proteins?
 - (A) 1940
 - (B) 1951
 - (C) 1963
 - (D) 1981
- 43. Who coined the term "enzyme"?
 - (A) James Sumner
 - (B) Friedrich Kuhne
 - (C) Louis Pasteur
 - (D) Antoine Reaumur
- 44. The protein part of coenzyme is called as :
 - (A) Holoenzyme
 - (B) Apoenzyme
 - (C) Cofactors
 - (D) None of the above

- 45. In an incomplete dominance experiment, a four O'clock plant (Mirabilis jalapa) with red flowers were crossed with the white flowers, pink flowered F1 plants were obtained. If the pink flowered F1 plants are self-crossed, what would be F2 plants phenotypic ratio?
 - (A) 3:1
 - (B) 9:3:1
 - (C) 1:2:1
 - (D) 1:4:1
 - 46. How many qualitative traits Mendel studied for his experiment on Pisum sativum?
 - (A) 4
 - (B) 7
 - (C) 8
 - (D) 9
 - 47. Which of the following is not true for Z-DNA?
 - (A) Z-DNA is a left-handed double helix structure
 - (B) Z-DNA is thinner than B-DNA
 - (C) In Z-DNA, the repeating unit is 2 base pairs
 - (D) In Z-DNA, the repeating unit is a 1 base pair
 - 48. While describing the aneuploidy in diploid organisms,
 - the correct formula for "double trisomic" condition is:
 - (A) 2n+1+1
 - (B) 2n-1-1
 - (C) 2n+1
 - (D) 2n+2

6

- 49. The model of replication, where a parental duplex DNA gives rise to two identical daughter duplexes DNA with each containing one original parental strand and one new strand, is called as :
 - (A) Conservative replication
 - (B) Semiconservative replication
 - (C) Dispersive replication
 - (D) None of the above

SP-4493-A

50. How many codons in the genetic code specify the 56. Levels of ozone in the stratosphere are measured in :

- 20 amino acids, most commonly found in proteins ?
 - (A) 61 sense codons, 3 stop codons
 - (B) 62 sense codons, 3 stop codons
 - (C) 63 sense codons, 3 stop codons
 - (D) 64 sense codons, 3 stop codons
- Who among the following formulated operon 57. Who is referred to as father of chromatography? 51. model?
 - (A) William Harvey
 - (B) Jacob and Monod
 - (C) Weiss and Hurwitz
 - (D) Robin Holliday
- 52. DNA dependent RNA synthesis is catalyzed by the 58. SDS-PAGE stands for : enzyme known as:
 - (A) DNA dependent RNA Polymerase
 - (B) RNA dependent RNA Polymerase
 - (C) Gyrase
 - (D) Topoisomerase
- 53. The oxidation of ammonium ions to nitrite and subsequent oxidation of nitrite to nitrate is called as :
 - (A) Ammonification
 - (B) Nitrification
 - (C) Denitrification
 - (D) Anammox
- 54 Which of the following is true for acid rain?
 - (A) pH of the rain water drops below 5.6
 - (B) pH of the acid rain ranges between 4.2 and 4.4
 - (C) Airborne sulfuric acid and nitric acid make water more acidic
 - (D) All of the above
- 55. An illness that begins when large amounts of nitrates in water are ingested by an infant and converted to 60. nitrite by the digestive system is known as :
 - (A) Minamata disease
 - (B) Itai-itai disease
 - (C) Blue baby syndrome
 - (D) Down's syndrome

- (A) Dobson Units
- (B) Cubic millimeters
- (C) Cubic yards
- (D) Milliliter per litre
- (A) Tswet
- (B) Martin
- (C) Synge
- (D) Karlson
- (A) Sodium decylsulfate polyacrylamide gel electrophoresis
- (B) Sodium desulfate polyacrylamine gel electrophoresis
- (C) Sodium decisulfate polyacrylamide gel electrophoresis
- (D) Sodium dodecylsulfate polyacrylamide gel electrophoresis
- 59. "Recombinants are hybrid DNA molecules consisting of autonomously replicating DNA segment and inserted elements". Such molecules are also called as:
 - (A) Plasmids
 - (B) Cosmids
 - (C) Chimera
 - (D) Phagemids

What are the pre-requisites for polymerase chain reaction?

- (A) Primers only
- (B) Primers and Taq polymerase
- (C) Primers, Taq polymerase and DNA
- (D) Primers and DNA

SP-4493-A

		08 Sr. No	2
	ENTRAN	NCE TEST-2024	
	SCHOOL OF B	IOLOGICAL SCIENCES	
		RESOURCES	
Total Questions :	60	Question Booklet Series	B
Fime Allowed :	70 Minutes	Roll No. :	
1. Write your Entra and fill up the new	ance Test Roll Number in	ions for Candidates : the space provided at the top of this page of Question Bo spaces provided on the OMR Answer Sheet.	oklet
entries in the Ori	iginal Conv candidate she	and a Candidate's Copy glued beneath it at the top. While ma ould ensure that the two copies are aligned properly so the each item are exactly copied in the Candidate's Copy.	aking at the
All entries in the C only.	OMR Answer Sheet, includ	ding answers to questions, are to be recorded in the Original	Сору
4. Choose the corre darken the circle read by the OMR	ect / most appropriate resp of the appropriate respons Scanner and no complain	ponse for each question among the options A, B, C and I se completely. The incomplete darkened circle is not cor at to this effect shall be entertained.	D and rectly
5. Use only blue/bla gel/ink pen or pen	ack ball point pen to dark acil should be used.	ten the circle of correct/most appropriate response. In no	o case
6. Do not darken more response shall be o	ore than one circle of optic considered wrong.	ons for any question. A question with more than one darl	kened
7. There will be 'Ne 0.25 marks from t	egative Marking' for wro the total score of the candi	ong answers. Each wrong answer will lead to the deduct idate.	ion of
8. Only those candid admission.	lates who would obtain po	ositive score in Entrance Test Examination shall be eligib	ole for
9. Do not make any s	stray mark on the OMR sh	heet.	
10. Calculators and mo	obiles shall not be permitte	ed inside the examination hall.	
11. Rough work, if any	y, should be done on the bl	lank sheets provided with the question booklet.	
12. OMR Answer Shee be evaluated.	et must be handled carefully	ly and it should not be folded or mutilated in which case it w	rill not
13. Ensure that your Ol	MR Answer Sheet has bee	en signed by the Invigilator and the candidate himself/her	self.
14. At the end of the ex original OMR shee	camination, hand over the et in presence of the Candi	OMR Answer Sheet to the invigilator who will first tear of lidate and hand over the Candidate's Copy to the candidate	off the ite.
493–B		1 [Turi	n over

SEAL

1		
	1. Which of the following is not a viral disease of	6. Saccharomyces carlsbergensis is used to prepare :
	silkworms?	(A) Cheese
	(A) Grasserie	(B) Beer
	(B) Cytoplasmic polyhedrosis	(C) Antibiotics
	(C) Pebrine	(D) Bread
	(D) Gattine	7. Enthalpy, the heat content of the reacting system, is
	2. To explain the basis of heterosis, who among the	represented by :
	following proposed overdominance hypothesis?	(A) $H = U - PW$
	(A) Shull and East	(B) $H = U + PW$
	(B) Jones	(C) $H - U - PV$
	(C) Fisher(D) Mather	(D) $H = U + PV$
3		8. According to first law of thermodynamics :
5	(A) Single cell protein	(A) Energy can be created but not destroyed
	(A) Single cell polysaccharide	(B) Energy can be created and destroyed
	(C) Single cell polystyrene	(C) Energy can neither be created nor destroyed
	(D) Somatic cell proliferation	(D) None of the above
4.		9. Which of the following is true for pH?
	microbe?	(A) $pH = -\log[H+]$
	(A) Streptococcus lactis	
	(B) Penicillum candidum	(B) $pH = \log \frac{1}{[H+]}$
	(C) Brevibacterium linens	(C) $pH = log [H+]$
	(D) Beauveria bassiana	(D) Both (A) and (B)
5.	In which year, Alexander Fleming was awarded	10. Buffers are mixtures of :
	Nobel Prize for his study on antibiotics?	(A) Weak acids and their conjugate bases
	(A) 1930	(B) Strong acids and their conjugate bases
	(B) 1945	(C) Weak alkaloids and their conjugate bases
	(C) 1950	(D) Strong alkaloids and their conjugate bases
	(D) 1962	

2

SP-4493-B

- 11. The statement "omnis cellula e cellula" was proposed 16. Which of the following is most appropriate for extraby:
 - (A) Robert Hooke
 - (B) Anton van Leeuwenhoek
 - (C) Rudolf Virchow
 - (D) Schleiden and Schwann
- In which year, Jonathan Singer and Garth Nicolson 17. 12. proposed fluid-mosaic model of plasma membrane?
 - (A) 1970
 - (B) 1972
 - (C) 1974
 - (D) 1976
- 13. Which of the following was earlier known as GERL (Golgi complex-ER-lysosome)?
 - (A) trans-Golgi network
 - (B) *cis*-Golgi network
 - (C) Endoplasmic reticulum
 - (D) Lysosomes
- 14. The period between the end of mitosis phase and the start of DNA replication is called as :
 - (A) G1 phase
 - (B) G2 phase
 - (C) S phase
 - (D) None of the above
- 15. The zona pellucida of most mammalian eggs is 20. composed mainly of:
 - (A) ZP1 glycoproteins
 - (B) ZP2 glycoproteins
 - (C) ZP3 glycoproteins
 - (D) All of the above

SP-4493-B

- embryonic membranes?
 - (A) Amnion, chorion
 - (B) Yolk sac, allantois
 - (C) Amnion, chorion, yolk sac
 - (D) Amnion, chorion, yolk sac, allantois
- Pollination in which the pollen from the anthers of one flower are transferred to the stigma of another flower borne on the same plant is termed as :
 - (A) Cleistogamy
 - (B) Homogamy
 - (C) Geitonogamy
 - (D) Xenogamy
- 18. The development of reproductive propagules without meiosis and syngamy is called as :
 - (A) Porogamy
 - (B) Mesogamy
 - (C) Apomixis
 - (D) Siphonogamy
- 19. In which plant, Frits Went discovered Auxin hormone?
 - (A) Avena sativa
 - (B) Triticum aestivum
 - (C) Brassica oleracea var. botrytis
 - (D) Solanum tuberosum

The downward curvature of leaves that occurs when the upper (adaxial) side grows faster than the lower (abaxial) side is termed as :

- (A) Thermonasty
- (B) Epinasty
- (C) Nyctinasty

3

(D) Thigmonasty

- 21. Which of the following is not true for innate immune 26. response?
 - (A) Antigen specific
 - (B) Rapid response
 - (C) Limited diversity
 - (D) Found both in vertebrates and invertebrates
- 22. The only class of immunoglobulins that passes through the placenta and enabling the mother to transfer her immunity to the foctus is :
 - (A) IgG
 - (B) IgA
 - (C) IgM
 - (D) IgE
- 23. In photosynthesis, light independent process is also called as :
 - (A) Carbon fixation
 - (B) Calvin Benson cycle
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 24. Hatch-Slack pathway is also known as :
 - (A) C_3 cycle
 - (B) C_4 cycle
 - (C) CAM pathway
 - (D) None of the above
- 25. Who discovered urea cycle?
 - (A) Krebs and Henseleit
 - (B) Friedrich Wohler
 - (C) Antoine Lavoisier
 - (D) James Sumner

SP-4493-B

- Glycolytic pathway, also known as Embden-Meyerhof pathway, is an example of :
- (A) Anacrobic fermentation
- (B) Acrobic fermentation
- (C) Phosphorylation
- (D) None of the above
- 27. Choose the correct empirical formula of monosaccharides:
 - (A) (CHO)_n
 - (B) $(CH_2O)_n$
 - (C) $(CH_{3}O)_{n}$
 - (D) $(CH_4O)_n$
- 28. GAG stands for :
 - (A) Glycoacetoglycans
 - (B) Glycoacylglycans
 - (C) Glycoamineglycans
 - (D) Glycosaminoglycans
- 29. Choose the correct statement for saturated fatty acids:
 - (A) Linear chains of CH₂ groups linked by carboncarbon double bonds
 - (B) Linear chains of CH groups linked by carboncarbon single bonds
 - (C) Linear chains of CH_4 groups linked by carboncarbon single bonds
 - (D) Linear chains of CH₂ groups linked by carboncarbon single bonds
- 30. Who introduced the term "Sphingolipids"?
 - (A) Herbert Carter
 - (B) Michael Garbriel
 - (C) Dietrich Stephan
 - (D) Adam Gilbert
- 4

31. Which one among the following is the first amino acid 36. How many qualitative traits Mendel studied for his

- (A) Glycine
- (B) Alanine
- (C) Asparagine
- (D) Lysine
- 32. In which year, Linus Pauling and Robert Corey proposed two structures namely α helix and β pleated sheets of proteins?
 - (A) 1940
 - (B) 1951
 - (C) 1963
 - (D) 1981
- 33. Who coined the term "enzyme"?
 - (A) James Sumner
 - (B) Friedrich Kuhne
 - (C) Louis Pasteur
 - (D) Antoine Reaumur
- 34. The protein part of coenzyme is called as :
 - (A) Holoenzyme
 - (B) Apoenzyme
 - (C) Cofactors
 - (D) None of the above

35. In an incomplete dominance experiment, a four O'clock plant (Mirabilis jalapa) with red flowers were crossed with the white flowers, pink flowered F1 plants were obtained. If the pink flowered F1 plants are self-crossed, what would be F2 plants phenotypic 40. ratio?

- (A) 3:1
- (B) 9:3:1
- (C) 1:2:1
- (D) 1:4:1

experiment on Pisum sativum?

- (A) 4 (B) 7
- (C) 8
- (D) 9
- Which of the following is not true for Z-DNA? 37.
 - (A) Z-DNA is a left-handed double helix structure
 - (B) Z-DNA is thinner than B-DNA
 - (C) In Z-DNA, the repeating unit is 2 base pairs
 - (D) In Z-DNA, the repeating unit is a 1 base pair
- 38. While describing the aneuploidy in diploid organisms, the correct formula for "double trisomic" condition is:
 - (A) 2n+1+1
 - (B) 2n-1-1
 - (C) 2n+1
 - (D) 2n+2
- 39. The model of replication, where a parental duplex DNA gives rise to two identical daughter duplexes DNA with each containing one original parental strand and one new strand, is called as :
 - (A) Conservative replication
 - (B) Semiconservative replication
 - (C) Dispersive replication
 - (D) None of the above

5

How many codons in the genetic code specify the 20 amino acids, most commonly found in proteins?

- (A) 61 sense codons, 3 stop codons
- (B) 62 sense codons, 3 stop codons
- (C) 63 sense codons, 3 stop codons
- (D) 64 sense codons, 3 stop codons

LOW CHERRY & & CONT

SP-4493-B

- 41. Who among the following formulated operon 47. Who is referred to as father of chromatography? model?
 - (A) William Harvey
 - (B) Jacob and Monod
 - (C) Weiss and Hurwitz
 - (D) Robin Holliday
- 42. DNA dependent RNA synthesis is catalyzed by the enzyme known as:
 - (A) DNA dependent RNA Polymerase
 - (B) RNA dependent RNA Polymerase
 - (C) Gyrase
 - (D) Topoisomerase
- 43. The oxidation of ammonium ions to nitrite and subsequent oxidation of nitrite to nitrate is called as :
 - (A) Ammonification
 - (B) Nitrification
 - (C) Denitrification
 - (D) Anammox
- 44. Which of the following is true for acid rain?
 - (A) pH of the rain water drops below 5.6
 - (B) pH of the acid rain ranges between 4.2 and 4.4
 - (C) Airborne sulfuric acid and nitric acid make water more acidic
 - (D) All of the above
- 45. An illness that begins when large amounts of nitrates in water are ingested by an infant and converted to nitrite by the digestive system is known as :
 - (A) Minamata disease
 - (B) Itai-itai disease
 - (C) Blue baby syndrome
 - (D) Down's syndrome
- 46. Levels of ozone in the stratosphere are measured in :
 - (A) Dobson Units
 - (B) Cubic millimeters
 - (C) Cubic yards
 - (D) Milliliter per litre

- (A) Tswet
- (B) Martin
- (C) Synge
- (D) Karlson
- SDS-PAGE stands for : 48.
 - (A) Sodium decylsulfate polyacrylamide gel electrophoresis
 - (B) Sodium desulfate polyacrylamine gel electrophoresis
 - (C) Sodium decisulfate polyacrylamide gel electrophoresis
 - (D) Sodium dodecylsulfate polyacrylamide gel electrophoresis
- 49. "Recombinants are hybrid DNA molecules consisting of autonomously replicating DNA segment and inserted elements". Such molecules are also called as:
 - (A) Plasmids
 - (B) Cosmids
 - (C) Chimera
 - (D) Phagemids
- 50. What are the pre-requisites for polymerase chain reaction?
 - (A) Primers only
 - (B) Primers and Taq polymerase
 - (C) Primers, Taq polymerase and DNA
 - (D) Primers and DNA
- 51. In which year the International Union for the Conservation of Nature and Natural Resources (IUCN) was established?
 - (A) 1944
 - (B) 1948
 - (C) 1952
 - (D) 1956

6

SP-4493-B

- 52. According to biological species concept, species are 56. groups of potentially interbreeding natural populations that are:
 - (A) Reproductively isolated
 - (B) Geographically isolated
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 53. Who among the following proposed 'Universal' model 57. for energy flow?
 - (A) Evans
 - (B) Linnaeus
 - (C) Odum
 - (D) Gilbert
- 54. A broadscale distribution of world vegetation and associated animals with a distinct ecological community of plants and animals living together in a particular climate is termed as :
 - (A) Biome
 - (B) Taiga biome
 - (C) Tundra biome
 - (D) Desert biome
- 55. In which year, Vavilov first published his concept of centres of origin of cultivated plants?
 - (A) 1916
 - (B) 1922
 - (C) 1926
 - (D) 1930

What is name of a commercial drug, that has a major ingredient of *Arnebiabenthamii*, with antifungal, antibacterial, anti-inflammatory and wound-healing properties?

- (A) Atropine
- (B) Gaozaban
- (C) Morphine
- (D) Digoxin

The scientific name of common dandelion is :

- (A) Malva sylvestris
- (B) Cichorium intybus
- (C) Taraxacum officinale
- (D) Atropa acuminata
- 58. Jute is a bast fibre that is harvested from the plant :
 - (A) Corchorus capsularis
 - (B) Boehmeria nivea
 - (C) Cannabis sativa
 - (D) Linum usitatissimum
- 59. The scientific name of rainbow trout is:
 - (A) Salmo platycephalus
 - (B) Salvelinus fontinalis
 - (C) Salmo trutta
 - (D) Oncorhynchus mykiss
- 60. Which of the following is a fungal disease of honey bees?
 - (A) Sac brood disease
 - (B) Chalkbrood disease
 - (C) Nosema disease

7

- -

(D) American foul brood

ENTRANCE 7	FEST-2024
SCHOOL OF BIOLOG	
BIORESOU	RCES Question Booklet Series
Total Questions : 60 Time Allowed : 70 Minutes	Roll No. :
Instructions for Ca 1. Write your Entrance Test Roll Number in the space p and fill up the necessary information in the spaces pro-	indidates:
2. OMR Answer Sheet has an Original Copy and a Candi entries in the Original Copy, candidate should ensure entries made in the Original Copy against each item ar	date's Copy glued beneath it at the top. While making e that the two copies are aligned properly so that the e exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answer only.	
4. Choose the correct / most appropriate response for e darken the circle of the appropriate response complet read by the OMR Scanner and no complaint to this eff	each question among the options A, B, C and D and tely. The incomplete darkened circle is not correctly ect shall be entertained.
Use only blue/black ball point pen to darken the circ gel/ink pen or pencil should be used.	ele of correct/most appropriate response. In no case
6. Do not darken more than one circle of options for any response shall be considered wrong.	y question. A question with more than one darkened
 There will be 'Negative Marking' for wrong answe 0.25 marks from the total score of the candidate. 	rs. Each wrong answer will lead to the deduction of
8. Only those candidates who would obtain positive sco admission.	re in Entrance Test Examination shall be eligible for
9. Do not make any stray mark on the OMR sheet.	
10. Calculators and mobiles shall not be permitted inside th	e examination hall.
11. Rough work, if any, should be done on the blank sheet	s provided with the question booklet.
12. OMR Answer Sheet must be handled carefully and it she be evaluated.	ould not be folded or mutilated in which case it will not
13. Ensure that your OMR Answer Sheet has been signed by	by the Invigilator and the candidate himself/herself.
14. At the end of the examination, hand over the OMR And original OMR sheet in presence of the Candidate and	swer Sheet to the invigilator who will first tear off the hand over the Candidate's Copy to the candidate.
2-4493-C	[Turn over

- The statement "*omnis cellula e cellula*" was proposed 6.
 by :
 - (A) Robert Hooke
 - (B) Anton van Leeuwenhoek
 - (C) Rudolf Virchow
 - (D) Schleiden and Schwann
- 2. In which year, Jonathan Singer and Garth Nicolson 7. proposed fluid-mosaic model of plasma membrane?
 - (A) 1970
 - (B) 1972
 - (C) 1974
 - (D) 1976
- Which of the following was earlier known as GERL (Golgi complex-ER-lysosome)?
 - (A) trans-Golgi network
 - (B) Golgi network
 - (C) Endoplasmic reticulum
 - (D) Lysosomes
- 4. The period between the end of mitosis phase and the start of DNA replication is called as :
 - (A) G1 phase
 - (B) G2 phase
 - (C) S phase
 - (D) None of the above
- 5. The zona pellucida of most mammalian eggs is 10. composed mainly of:
 - (A) ZP1 glycoproteins
 - (B) ZP2 glycoproteins
 - (C) ZP3 glycoproteins
 - (D) All of the above

SP-4493-C

- Which of the following is most appropriate for extraembryonic membranes?
- (A) Amnion, chorion
- (B) Yolk sac, allantois
- (C) Amnion, chorion, yolk sac
- (D) Amnion, chorion, yolk sac, allantois
- Pollination in which the pollen from the anthers of one flower are transferred to the stigma of another flower borne on the same plant is termed as :
 - (A) Cleistogamy
 - (B) Homogamy
 - (C) Geitonogamy
 - (D) Xenogamy

8.

9.

- The development of reproductive propagules without meiosis and syngamy is called as :
 - (A) Porogamy
 - (B) Mesogamy
 - (C) Apomixis
 - (D) Siphonogamy
- In which plant, Frits Went discovered Auxin hormone?
 - (A) Avena sativa
 - (B) Triticum aestivum
 - (C) Brassica oleracea var. botrytis
 - (D) Solanum tuberosum

The downward curvature of leaves that occurs when the upper (adaxial) side grows faster than the lower (abaxial) side is termed as :

- (A) Thermonasty
- (B) Epinasty
- (C) Nyctinasty
- (D) Thigmonasty

- 11. Which of the following is not true for innate immune 16. Glycolytic pathway, also known as Embden-Meyerhresponse?
 - (A) Antigen specific
 - (B) Rapid response
 - (C) Limited diversity
 - (D) Found both in vertebrates and invertebrates
- 12. The only class of immunoglobulins that passes through the placenta and enabling the mother to transfer her immunity to the foetus is :
 - (A) IgG
 - (B) IgA
 - (C) IgM
 - (D) IgE
- 13. In photosynthesis, light independent process is also called as:
 - (A) Carbon fixation
 - (B) Calvin Benson cycle
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 14. Hatch-Slack pathway is also known as :
 - (A) C_3 cycle
 - (B) C_{4} cycle
 - (C) CAM pathway
 - (D) None of the above
- 15. Who discovered urea cycle?
 - (A) Krebs and Henseleit
 - (B) Friedrich Wohler
 - (C) Antoine Lavoisier
 - (D) James Sumner

SP-4493-C

of pathway, is an example of :

- (A) Anaerobic fermentation
- (B) Aerobic fermentation
- (C) Phosphorylation
- (D) None of the above
- Choose the correct empirical formula of 17. monosaccharides:
 - (A) (CHO)
 - (B) (CH,O),
 - $(C) (CH_3O)_n$
 - (D) $(CH_4O)_n$
- 18. GAG stands for :
 - (A) Glycoacetoglycans
 - (B) Glycoacylglycans
 - (C) Glycoamineglycans
 - (D) Glycosaminoglycans
- 19. Choose the correct statement for saturated fatty acids:
 - (A) Linear chains of CH, groups linked by carboncarbon double bonds
 - (B) Linear chains of CH groups linked by carboncarbon single bonds
 - (C) Linear chains of CH_{A} groups linked by carboncarbon single bonds
 - (D) Linear chains of CH, groups linked by carboncarbon single bonds
- 20. Who introduced the term "Sphingolipids"?
 - (A) Herbert Carter
 - (B) Michael Garbriel
 - (C) Dietrich Stephan
 - (D) Adam Gilbert

3

21. Which one among the following is the first amino acid 26. that was discovered ?

- (A) Glycine
- (B) Alanine
- (C) Asparagine
- (D) Lysine
- 22. In which year, Linus Pauling and Robert Corey proposed two structures namely α helix and β pleated sheets of proteins?
 - (A) 1940
 - (B) 1951
 - (C) 1963
 - (D) 1981
- 23. Who coined the term "enzyme"?
 - (A) James Sumner
 - (B) Friedrich Kuhne
 - (C) Louis Pasteur
 - (D) Antoine Reaumur
- 24. The protein part of coenzyme is called as :
 - (A) Holoenzyme
 - (B) Apoenzyme
 - (C) Cofactors
 - (D) None of the above
- 25. In an incomplete dominance experiment, a four O'clock plant (Mirabilis jalapa) with red flowers were crossed with the white flowers, pink flowered F1 plants were obtained. If the pink flowered F1 plants are self-crossed, what would be F2 plants phenotypic ratio?
 - (A) 3:1
 - (B) 9:3:1
 - (C) 1:2:1
 - (D) 1:4:1
- SP-4493-C

- How many qualitative traits Mendel studied for his experiment on Pisum sativum?
 - (A) 4
 - (B) 7
 - (C) 8
 - (D) 9
- 27. Which of the following is not true for Z-DNA?
 - (A) Z-DNA is a left-handed double helix structure
 - (B) Z-DNA is thinner than B-DNA
 - (C) In Z-DNA, the repeating unit is 2 base p_{airs}
 - (D) In Z-DNA, the repeating unit is a 1 base p_{air}
- 28. While describing the aneuploidy in diploid $\operatorname{organisms}$.
- the correct formula for "double trisomic" condition is:
 - (A) 2n+1+1
 - (B) 2n-1-1
 - (C) 2n+1
 - (D) 2n+2
- 29. The model of replication, where a parental $duple_x$ DNA gives rise to two identical daughter duplexes DNA with each containing one original parental strand and one new strand, is called as :
 - (A) Conservative replication
 - (B) Semiconservative replication
 - (C) Dispersive replication
 - (D) None of the above
- 30. How many codons in the genetic code specify the 20 amino acids, most commonly found in proteins?
 - (A) 61 sense codons, 3 stop codons
 - (B) 62 sense codons, 3 stop codons
 - (C) 63 sense codons, 3 stop codons
 - (D) 64 sense codons, 3 stop codons
- 31. Who among the following formulated opero model?
 - (A) William Harvey
 - (B) Jacob and Monod
 - (C) Weiss and Hurwitz
 - (D) Robin Holliday

Δ

RINERANCE TEST-2024

- 32. DNA dependent RNA synthesis is catalyzed by the 38. SDS-PAGE stands for : enzyme known as :
 - (A) DNA dependent RNA Polymerase
 - (B) RNA dependent RNA Polymerase
 - (C) Gyrase
 - (D) Topoisomerase
- 33. The oxidation of ammonium ions to nitrite and subsequent oxidation of nitrite to nitrate is called as :
 - (A) Ammonification
 - (B) Nitrification
 - (C) Denitrification
 - (D) Anammox
- 34. Which of the following is true for acid rain?
 - (A) pH of the rain water drops below 5.6
 - (B) pH of the acid rain ranges between 4.2 and 4.4
 - (C) Airborne sulfuric acid and nitric acid make water more acidic
 - (D) All of the above
- 35. An illness that begins when large amounts of nitrates in water are ingested by an infant and converted to 40. What are the pre-requisites for polymerase chain nitrite by the digestive system is known as :
 - (A) Minamata disease
 - (B) Itai-itai disease
 - (C) Blue baby syndrome
 - (D) Down's syndrome
- 36. Levels of ozone in the stratosphere are measured in :
 - (A) Dobson Units
 - (B) Cubic millimeters
 - (C) Cubic yards
 - (D) Milliliter per litre
- 37. Who is referred to as father of chromatography?
 - (A) Tswet
 - (B) Martin
 - (C) Synge
 - (D) Karlson

- - (A) Sodium decylsulfate polyacrylamide gel electrophoresis
 - (B) Sodium desulfate polyacrylamine gel electrophoresis
 - (C) Sodium decisulfate polyacrylamide gel electrophoresis
 - (D) Sodium dodecylsulfate polyacrylamide gel electrophoresis
- 39. "Recombinants are hybrid DNA molecules consisting of autonomously replicating DNA segment and inserted elements". Such molecules are also called as:
 - (A) Plasmids
 - (B) Cosmids
 - (C) Chimera
 - (D) Phagemids
 - reaction?
 - (A) Primers only
 - (B) Primers and Taq polymerase
 - (C) Primers, Taq polymerase and DNA
 - (D) Primers and DNA
- 41. In which year the International Union for the Conservation of Nature and Natural Resources (IUCN) was established?
 - (A) 1944
 - (B) 1948
 - (C) 1952
 - (D) 1956

- 42. According to biological species concept, species are 46. groups of potentially interbreeding natural populations that are:
 - (A) Reproductively isolated
 - (B) Geographically isolated
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 43. Who among the following proposed 'Universal' model

for energy flow?

- (A) Evans
- (B) Linnaeus
- (C) Odum
- (D) Gilbert
- 44. A broadscale distribution of world vegetation and associated animals with a distinct ecological community of plants and animals living together in a particular climate is termed as :
 - (A) Biome
 - (B) Taiga biome
 - (C) Tundra biome
 - (D) Desert biome
- 45. In which year, Vavilov first published his concept of centres of origin of cultivated plants?
 - (A) 1916
 - (B) 1922
 - (C) 1926
 - (D) 1930

What is name of a commercial drug, that has a major ingredient of Arnebiabenthamii, with antifungal, antibacterial, anti-inflammatory and wound-healing properties?

- (A) Atropine
- (B) Gaozaban
- (C) Morphine
- (D) Digoxin

47

- The scientific name of common dandelion is :
 - (A) Malva sylvestris
 - (B) Cichorium intybus
 - (C) Taraxacum officinale
 - (D) Atropa acuminata
- Jute is a bast fibre that is harvested from the plant: 48.
 - (A) Corchorus capsularis
 - (B) Boehmeria nivea
 - (C) Cannabis sativa
 - (D) Linum usitatissimum
- The scientific name of rainbow trout is: 49.
 - (A) Salmo platycephalus
 - (B) Salvelinus fontinalis
 - (C) Salmo trutta
 - (D) Oncorhynchus mykiss
- 50. Which of the following is a fungal disease of honey bees?
 - (A) Sac brood disease
 - (B) Chalkbrood disease
 - (C) Nosema disease

6

(D) American foul brood

SP-4493-C

Which of the following is not a viral disease of 56. Saccharomyces carlsbergensis is used to prepare : silkworms?

- (A) Grasserie
- (B) Cytoplasmic polyhedrosis
- (C) Pebrine
- (D) Gattine
- To explain the basis of heterosis, who among the 57. 2. following proposed overdominance hypothesis?
 - (A) Shull and East
 - (B) Jones
 - (C) Fisher
 - (D) Mather
- 3. SCP stands for :
 - (A) Single cell protein
 - (B) Singel cell polysaccharide
 - (C) Single cell polystyrene
 - (D) Somatic cell proliferation
- 59. 54. Which of the following is not a cheese producing microbe?
 - (A) Streptococcus lactis
 - (B) Penicillum candidum
 - (C) Brevibacterium linens
 - (D) Beauveria bassiana
- 55. In which year, Alexander Fleming was awarded 60. Buffers are mixtures of : Nobel Prize for his study on antibiotics?
 - (A) 1930
 - (B) 1945
 - (C) 1950
 - (D) 1962

- (A) Cheese
- (B) Beer
- (C) Antibiotics
- (D) Bread

Enthalpy, the heat content of the reacting system, is represented by :

- (A) H = U PW
- (B) H = U + PW
- (C) H U PV
- (D) H = U + PV
- 58. According to first law of thermodynamics :
 - (A) Energy can be created but not destroyed
 - (B) Energy can be created and destroyed
 - (C) Energy can neither be created nor destroyed
 - (D) None of the above
 - Which of the following is true for pH?

(A) $pH = -\log[H+]$

- (B) $pH = \log \frac{1}{[H+]}$
- (C) pH = log [H+]
- (D) Both (A) and (B)

- (A) Weak acids and their conjugate bases
- (B) Strong acids and their conjugate bases
- (C) Weak alkaloids and their conjugate bases
- (D) Strong alkaloids and their conjugate bases

		Sr. No
EN	NTRANCE	TEST-2024
SCHO	OOL OF BIOLO	GICAL SCIENCES
	BIORESO	URCES Ouestion Booklet Series
Total Questions : 60 Time Allowed : 70 Min	utes	Question Booklet Series D Roll No. :
1. Write your Entrance Test and fill up the necessary in	Instructions for C Roll Number in the space of formation in the spaces pr	Candidates : e provided at the top of this page of Question Booklet rovided on the OMR Answer Sheet.
2. OMR Answer Sheet has ar	n Original Copy and a Can	didate's Copy glued beneath it at the top. While making are that the two copies are aligned properly so that the are exactly copied in the Candidate's Copy.
3. All entries in the OMR Ansonly.	swer Sheet, including answ	vers to questions, are to be recorded in the Original Copy
4 Choose the correct / most	at appropriate response for ppropriate response comp r and no complaint to this e	r each question among the options A, B, C and D and letely. The incomplete darkened circle is not correctly effect shall be entertained.
5. Use only blue/black ball gel/ink pen or pencil shou	point pen to darken the ci lld be used.	ircle of correct/most appropriate response. In no case
6. Do not darken more than response shall be consider	one circle of options for a red wrong.	any question. A question with more than one darkened
7. There will be 'Negative I 0.25 marks from the total	Marking' for wrong answ score of the candidate.	wers. Each wrong answer will lead to the deduction of
		core in Entrance Test Examination shall be eligible for
9. Do not make any stray ma	ark on the OMR sheet.	
10. Calculators and mobiles sh		the examination hall.
		eets provided with the question booklet.
		should not be folded or mutilated in which case it will not
13. Ensure that your OMR An	nswer Sheet has been signe	ed by the Invigilator and the candidate himself/herself.
14 At the end of the exeminat	tion hand over the OMR A	Answer Sheet to the invigilator who will first tear off the nd hand over the Candidate's Copy to the candidate.
SP-4493–D	1	[Turn over

·

SEAL

- Which of the following is not true for innate immune 6. response?
 - (A) Antigen specific
 - (B) Rapid response
 - (C) Limited diversity
 - (D) Found both in vertebrates and invertebrates
- The only class of immunoglobulins that passes through the placenta and enabling the mother to transfer her immunity to the foetus is :
 - (A) IgG
 - (B) IgA
 - (C) IgM
 - (D) IgE
- 3. In photosynthesis, light independent process is also called as:
 - (A) Carbon fixation
 - (B) Calvin Benson cycle
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 4. Hatch-Slack pathway is also known as :
 - (A) C_3 cycle
 - (B) C_4 cycle
 - (C) CAM pathway
 - (D) None of the above
- 5. Who discovered urea cycle?
 - (A) Krebs and Henseleit
 - (B) Friedrich Wohler
 - (C) Antoine Lavoisier
 - (D) James Sumner

SP-4493–D

- Glycolytic pathway, also known as Embden-Meyerhof pathway, is an example of :
- (A) Anacrobic fermentation
- (B) Aerobic fermentation
- (C) Phosphorylation
- (D) None of the above
- Choose the correct empirical formula of monosaccharides:
 - (A) (CHO),

7.

- (B) $(CH_2O)_n$
- (C) $(CH_3O)_n$
- (D) $(CH_4O)_{r}$
- 8. GAG stands for :
 - (A) Glycoacetoglycans
 - (B) Glycoacylglycans
 - (C) Glycoamineglycans
 - (D) Glycosaminoglycans
- 9. Choose the correct statement for saturated fatty acids:
 - (A) Linear chains of CH_2 groups linked by carboncarbon double bonds
 - (B) Linear chains of CH groups linked by carboncarbon single bonds
 - (C) Linear chains of CH_4 groups linked by carboncarbon single bonds
 - (D) Linear chains of CH_2 groups linked by carboncarbon single bonds
- 10. Who introduced the term "Sphingolipids"?
 - (A) Herbert Carter
 - (B) Michael Garbriel
 - (C) Dietrich Stephan
 - (D) Adam Gilbert

- that was discovered ?
 - (A) Glycine
 - (B) Alanine
 - (C) Asparagine
 - (D) Lysine
- 12. In which year, Linus Pauling and Robert Corey proposed two structures namely α helix and β pleated sheets of proteins?
 - (A) 1940
 - (B) 1951
 - (C) 1963
 - (D) 1981
- 13. Who coined the term "enzyme"?
 - (A) James Sumner
 - (B) Friedrich Kuhne
 - (C) Louis Pasteur
 - (D) Antoine Reaumur
- 14. The protein part of coenzyme is called as :
 - (A) Holoenzyme
 - (B) Apoenzyme
 - (C) Cofactors
 - (D) None of the above
- 15. In an incomplete dominance experiment, a four O'clock plant (Mirabilis jalapa) with red flowers were crossed with the white flowers, pink flowered F1 plants were obtained. If the pink flowered F1 plants are self-crossed, what would be F2 plants phenotypic ratio?
 - (A) 3:1
 - (B) 9:3:1
 - (C) 1:2:1
 - (D) 1:4:1

- 11. Which one among the following is the first amino acid 16. How many qualitative traits Mendel studied for his experiment on Pisum sativum?
 - (A) 4
 - (B) 7
 - (C) 8
 - (D) 9
 - Which of the following is not true for Z-DNA? 17.
 - (A) Z-DNA is a left-handed double helix structure
 - (B) Z-DNA is thinner than B-DNA
 - (C) In Z-DNA, the repeating unit is 2 base pairs
 - (D) In Z-DNA, the repeating unit is a 1 base pair
 - 18. While describing the aneuploidy in diploid organisms, the correct formula for "double trisomic" condition is:
 - (A) 2n+1+1
 - (B) 2n-1-1
 - (C) 2n+1
 - (D) 2n+2
 - 19. The model of replication, where a parental duplex DNA gives rise to two identical daughter duplexes DNA with each containing one original parental strand and one new strand, is called as :
 - (A) Conservative replication
 - (B) Semiconservative replication
 - (C) Dispersive replication
 - (D) None of the above
 - 20. How many codons in the genetic code specify the 20 amino acids, most commonly found in proteins?
 - (A) 61 sense codons, 3 stop codons
 - (B) 62 sense codons, 3 stop codons
 - (C) 63 sense codons, 3 stop codons
 - (D) 64 sense codons, 3 stop codons

SP-4493-D

3

- Who among the following formulated operon 27. Who is referred to as father of chromatography?
 (Λ) Tswet
 - (A) William Harvey
 - (B) Jacob and Monod
 - (C) Weiss and Hurwitz
 - (D) Robin Holliday
- DNA dependent RNA synthesis is catalyzed by the enzyme known as :
 - (A) DNA dependent RNA Polymerase
 - (B) RNA dependent RNA Polymerase
 - (C) Gyrase
 - (D) Topoisomerase
- 23. The oxidation of ammonium ions to nitrite and subsequent oxidation of nitrite to nitrate is called as :
 - (A) Ammonification
 - (B) Nitrification
 - (C) Denitrification
 - (D) Anammox
- 24. Which of the following is true for acid rain?
 - (A) pH of the rain water drops below 5.6
 - (B) pH of the acid rain ranges between 4.2 and 4.4
 - (C) Airborne sulfuric acid and nitric acid make water more acidic
 - (D) All of the above
- 25. An illness that begins when large amounts of nitrates in water are ingested by an infant and converted to nitrite by the digestive system is known as :
 - (A) Minamata disease
 - (B) Itai-itai disease
 - (C) Blue baby syndrome
 - (D) Down's syndrome
- 26. Levels of ozone in the stratosphere are measured in :
 - (A) Dobson Units
 - (B) Cubic millimeters
 - (C) Cubic yards
 - (D) Milliliter per litre
- SP-4493–D

- (B) Martin
- (C) Synge
- (D) Karlson
- 28. SDS-PAGE stands for :
 - (A) Sodium decylsulfate polyacrylamide gel electrophoresis
 - (B) Sodium desulfate polyacrylamine gel
 electrophoresis
 - (C) Sodium decisulfate polyacrylamide gel electrophoresis
 - (D) Sodium dodecylsulfate polyacrylamide gel electrophoresis
- 29. "Recombinants are hybrid DNA molecules consisting of autonomously replicating DNA segment and inserted elements". Such molecules are also called as :
 - (A) Plasmids
 - (B) Cosmids
 - (C) Chimera
 - (D) Phagemids
- 30. What are the pre-requisites for polymerase chain reaction?
 - (A) Primers only
 - (B) Primers and Taq polymerase
 - (C) Primers, Taq polymerase and DNA
 - (D) Primers and DNA
- 31. In which year the International Union for the Conservation of Nature and Natural Resources (IUCN) was established?
 - (A) 1944
 - (B) 1948
 - (C) 1952
 - (D) 1956
- 4

- 32. According to biological species concept, species are 36. What is name of a commercial drug, that has a groups of potentially interbreeding natural populations that are:
 - (A) Reproductively isolated
 - (B) Geographically isolated
 - (C) Both (A) and (B)
 - (D) Neither (A) nor (B)
- 33. Who among the following proposed 'Universal' model for energy flow?
 - (A) Evans
 - (B) Linnaeus
 - (C) Odum
 - (D) Gilbert
- 34. A broadscale distribution of world vegetation and associated animals with a distinct ecological community of plants and animals living together in a particular climate is termed as :
 - (A) Biome
 - (B) Taiga biome
 - (C) Tundra biome
 - (D) Desert biome
- 35. In which year, Vavilov first published his concept of centres of origin of cultivated plants?
 - (A) 1916
 - (B) 1922
 - (C) 1926
 - (D) 1930

- major ingredient of Arnebiabenthamii, with antifungal, antibacterial, anti-inflammatory and wound-healing properties?
 - (A) Atropine
 - (B) Gaozaban
 - (C) Morphine
 - (D) Digoxin
- 37. The scientific name of common dandelion is :
 - (A) Malva sylvestris
 - (B) Cichorium intybus
 - (C) Taraxacum officinale
 - (D) Atropa acuminata
- Jute is a bast fibre that is harvested from the plant : 38.
 - (A) Corchorus capsularis
 - (B) Boehmeria nivea
 - (C) Cannabis sativa
 - (D) Linum usitatissimum
- 39. The scientific name of rainbow trout is:
 - (A) Salmo platycephalus
 - (B) Salvelinus fontinalis
 - (C) Salmo trutta
 - (D) Oncorhynchus mykiss
- 40. Which of the following is a fungal disease of honey bees?
 - (A) Sac brood disease
 - (B) Chalkbrood disease
 - (C) Nosema disease
 - (D) American foul brood

- 41. Which of the following is not a viral disease of 46. Saccharomyces carlsbergensis is used to prepare : silkworms?
 - (A) Grasserie
 - (B) Cytoplasmic polyhedrosis
 - (C) Pebrine
 - (D) Gattine
- 42. To explain the basis of heterosis, who among the following proposed overdominance hypothesis?
 - (A) Shull and East
 - (B) Jones
 - (C) Fisher
 - (D) Mather
- 43. SCP stands for :
 - (A) Single cell protein
 - (B) Singel cell polysaccharide
 - (C) Single cell polystyrene
 - (D) Somatic cell proliferation
- 49. 44. Which of the following is not a cheese producing microbe?
 - (A) Streptococcus lactis
 - (B) Penicillum candidum
 - (C) Brevibacterium linens
 - (D) Beauveria bassiana
- 50. 45. In which year, Alexander Fleming was awarded Nobel Prize for his study on antibiotics?
 - (A) 1930
 - (B) 1945
 - (C) 1950
 - (D) 1962

SP-4493-D

- - (A) Cheese
 - (B) Beer
 - (C) Antibiotics
 - (D) Bread
- 47. Enthalpy, the heat content of the reacting system, is represented by :
 - (A) H = U PW
 - (B) H = U + PW
 - (C) H U PV
 - (D) H = U + PV
- 48. According to first law of thermodynamics :
 - (A) Energy can be created but not destroyed
 - (B) Energy can be created and destroyed
 - (C) Energy can neither be created nor destroyed
 - (D) None of the above
 - Which of the following is true for pH?
 - (A) $pH = -\log[H+]$
 - (B) $pH = \log \frac{1}{[H+]}$
 - (C) pH = log[H+]

- (D) Both (A) and (B)
- Buffers are mixtures of :
 - (A) Weak acids and their conjugate bases
 - (B) Strong acids and their conjugate bases
 - (C) Weak alkaloids and their conjugate bases
 - (D) Strong alkaloids and their conjugate bases

. The statement "omnis cellula e cellula" was proposed 5	6. Which of the following is most appropriate for extra-
	embryonic membranes?
(A) Robert Hooke	(A) Amnion, chorion
Anton van Leeuwennoek	(B) Yolk sac, allantois
a Budolf Vitchow	(C) Amnion, chorion, yolk sac
m) Schleiden and Schwann	(D) Amnion, chorion, yolk sac, allantois
 ⁵² In which year, Jonathan Singer and Garth Nicolson ⁵³ proposed fluid-mosaic model of plasma membrane ? 	flower are transferred to the stigma of another notice
(A) 1970	borne on the same plant is termed as :
(B) 1972	(A) Cleistogamy
C) 1974	(B) Homogamy
⁽⁰⁾ 1976	(C) Geitonogamy
which of the following was earlier known as GERL 5	(D) Xenogamy
(Golgi complex-ER-lysosome)?	8. The development of reproductive propagules without meiosis and syngamy is called as :
(A) trans-Golgi network	(A) Porogamy
(B) cis-Golgi network	(B) Mesogamy
(C) Endoplasmic reticulum	(C) Apomixis
(D) Lysosomes	(D) Siphonogamy
54. The period between the end of mitosis phase and the 54	9. In which plant, Frits Went discovered Auxin hormone?
start of DNA replication is called as :	(A) Avena sativa
(A) G1 phase	(B) Triticum aestivum
(B) G2 phase	(C) Brassica oleracea var. botrytis
(C) S phase	(D) Solanum tuberosum
(D) None of the above 60	0. The downward curvature of leaves that occurs when
55. The <i>zona pellucida</i> of most mammalian eggs is composed mainly of:	the upper (adaxial) side grows faster than the lower (abaxial) side is termed as :
(A) ZP1 glycoproteins	(A) Thermonasty
(B) ZP2 glycoproteins	(B) Epinasty
	(C) Nyctinasty
(C) ZP3 glycoproteins	(D) Thigmonasty
(D) All of the above	
SP-4493-D	0

												Sr	. No	• •••••		•••••	
ENTRANCE TEST-2023																	
SCHOOL OF BIOLOGICAL SCIENCES																	
	BIORESOURCES																
Total (Total Questions : 60 Question Booklet Series																
	Allowed	:	70	Minute	es					Roll N	No. :						
Instructions for Candidates : 1. Write your Entrance Test Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the spaces provided on the OMR Answer Sheet.																	
2.	2. OMR Answer Sheet has an Original Copy and a Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.																
3.	8. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.																
4.	. Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.																
5.	. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.																
6.	Do not dan response sl					of optior	ons for	any qu	estion.	A ques	stion	witł	n mor	e thar	n one	dark	ened
7.	There will 0.25 marks							swers. H	Each w	rong ar	nswer	wi	ll lead	l to th	e dec	luction	on of
8.	Only those admission.		lidate	es who w	vould ol	btain pos	sitive s	score in	n Entrai	nce Tes	st Exa	amir	nation	shall	be el	ligibl	e for
9.	Do not ma	ıke an	y stra	ay mark	on the	OMR she	neet.										
10.	. Calculators	s and	mobi	les shall	not be p	permitted	d inside	e the ex	aminat	tion hall	l.						
11.	. Rough wo	rk, if	any,	should b	e done	on the bl	olank sł	heets pr	rovided	l with th	ne que	estic	on boo	oklet.			
12.	. OMR Ansy be evaluate		heet 1	must be h	nandled	carefully	y and it	t should	l not be	folded	or mu	ıtilat	ted in	which	ı case	it wi	ll not
13.	. Ensure that	t your	OM	R Answe	er Shee	t has been	en sign	ned by th	he Invi	gilator a	and th	ne ca	andida	ate hir	nself/	herse	elf.
14.	. At the end original ON																
SM-29	9580-A						1								[]	urn	over

- 1. According to the *Biosystematic species concept*, a 6. Coenospecies is considered equivalent to a
 - (A) Subspecies
 - (B) Subgenus
 - (C) Genus
 - (D) Family
- 2. The pyramid of energy which is a graphic representation of the amount of energy trapped per 7. unit time and area in different trophic levels in a food chain, is always
 - (A) Inverted
 - (B) Horizontal
 - (C) Linear
 - (D) Upright
- 3. The species which have much greater influence on 8. community characteristics relative to their low abundance or biomass are known as
 - (A) Keystone species
 - (B) Critical species
 - (C) Landstone species
 - (D) Trans species
- 4. Whittaker described the diversity within a particular 9. area or ecosystem usually expressed as species richness as
 - (A) Gamma diversity
 - (B) Beta diversity
 - (C) Alpha diversity
 - (D) None of the above
- 5. The separation of cotton lint from the seed is called
 - (A) Baling
 - (B) Ginning
 - (C) Seeding
 - (D) Galing

- Dandelion is the common name of this plant with hepatoprotective properties :
 - (A) Catharanthus roseus
 - (B) Atropa acuninata
 - (C) Cichorium intybus
 - (D) Taraxacum officinale

Historically this medicinal plant was grown by ancient Egyptians as a coffee substitute and vegetable crop :

- (A) Cichorium intybus
- (B) Malva sylvestris
- (C) Arnebia benthamii
- (D) Atropa acuminata

Hydrothermal treatment followed by drying before milling to improve the quality of rice is called

- (A) Lessboiling
- (B) Parboiling
- (C) Chemiboiling
- (D) None of the above
- Cleavage Polyembryony is seen in
- (A) Petunia
- (B) Citrus
- (C) Pinus
- (D) Mango

10. In honey bees the Royal jelly is secreted by

- (A) Comb gland
- (B) Crop gland
- (C) Pineal gland
- (D) Hypopharyngeal gland

SM-29580-A

11. The proteinaceous silk gum coating the fibres and 16. In TMV the Capsid consists of keeping them together in silkworms is called(A) 426 capsomeres

(A) Silkinin

- (B) Sericin
- (C) Bombyrin
- (D) Casuarin
- 12. In carp, the larvae emerging from the fertilized egg is called
 - (A) Hatchling
 - (B) Fry
 - (C) Fingerling
 - (D) Prawns
- 13. The most common prion disease in humans is
 - (A) Kuru
 - (B) Fatal familial Insomnia
 - (C) Creutzfeldt Jakob Disease
 - (D) Gerstmann Straussler Sheinker Syndrome
- 14. Which among the following is a poisonous mushroom ?
 - (A) Coprinus comatus
 - (B) Amanita muscaria
 - (C) Pleurotus sajar caju
 - (D) volvariella volvacea
- 15. Abnormal pathogenic agents that are transmissible and are able to induce abnormal folding of specific normal cellular proteins are called
 - (A) Virions
 - (B) Proteons
 - (C) Viriods
 - (D) Prions

- (B) 213 capsomeres
- (C) 2130 capsomeres
- (D) 4260 capsomeres
- 17. A frozen lake in winter with fish swimming below the surface is possible because of which property of water ?
 - (A) Cohesion
 - (B) Polarity
 - (C) Low molecular weight
 - (D) Adhesion
- 18. Exergonic reaction is
 - (A) Anabolic reaction
 - (B) Hydrolytic reaction
 - (C) Catabolic reaction
 - (D) All of the above
- 19. If the free energy of a chemical reaction is negative, it is a
 - (A) Non spontaneous reaction
 - (B) Reaction at Equilibrium
 - (C) Spontaneous chemical reaction
 - (D) None of the above
- 20. Which of the following bonds is the weakest?
 - (A) Van der waals forces
 - (B) Hydrogen bond
 - (C) Covalent bond
 - (D) Ionic bond

SM-29580-A

[Turn over

- 21. Which of the statement is true regarding the fluid 25. mosaic model proposed by Singer and Nicolson ?
 - (A) lipid and integral proteins are in a mosaic arrangement.
 - (B) The biological membranes are quasi-fluid structures.
 - (C) The concept of fluidity implies that the main components of the membrane are held in place by non-covalent interactions
 - (D) All the above
- 22. This stage of meiotic prophase I is recognized by the dissolution of the synaptonemal complex :
 - (A) Diakinesis
 - (B) Diplotene
 - (C) Pachytene
 - (D) Zygotene
- 23. The Thylakoids of different grana are connected to one another by flattened membranous structures called
 - (A) Thyllakoid
 - (B) Lamellar thyllakoid
 - (C) Stroma thyllakoid
 - (D) Stroma lamella
- 24. The inner mitochondrial membrane is rich in a phospholipid called
 - (A) Phosphatidylinositol
 - (B) Cardiolipin
 - (C) Phosphotidylserine
 - (D) Phosphotidylcholine

- . In males Cryptorchidism means
 - (A) Failure of one or both testes to descend into scrotum
 - (B) Presence of fluid in the scrotum
 - (C) Presence of intestinal contents in the scrotum
 - (D) Presence of more than two testes in the scrotum
- 26. Which of the following hormone is not produced by placenta ?
 - (A) Progesterone
 - (B) Estrogen
 - (C) Human Chorionic Gonadotrophin
 - (D) Tri iodothyronine
- 27. Albuminous seeds are produced in
 - (A) Bean
 - (B) Rice
 - (C) Orchids
 - (D) Wheat
- 28. Pollination by snail and slug is called
 - (A) Ornithophily
 - (B) Cheiropterophily
 - (C) Malacophily
 - (D) Anemophily
- 29. 'Milk let down' hormone is the name given to
 - (A) Progesterone
 - (B) Estrogen
 - (C) Oxytocin
 - (D) Testosterone
- 30. Cushings syndrome is caused by
 - (A) Hyposecretion of Cortisol
 - (B) Hyposecretion of Calcitonin
 - (C) Hypersecretion of Calcitonin
 - (D) Hypersecretion of Cortisol

SM-29580-A

4 ■

- 31. The hypersecretion of growth hormone in adults causes 37.
 - (A) Gigantism
 - (B) Acromegaly
 - (C) Cretinism
 - (D) Dwarfism
- 32. The immunoglobulins that mediate allergic reactions is
 - (A) Ig A
 - (B) Ig G
 - (C) Ig E
 - (D) Ig M
- 33. The final electron acceptor in lactic acid fermentation is
 - (A) Pyruvate
 - (B) NADH
 - (C) O_2
 - (D) Lactic acid
- 34. The Chemiosmotic hypothesis was proposed by
 - (A) Alfred Russell
 - (B) Gregor Mendel
 - (C) Charles De Moore
 - (D) Peter Dennis Mitchell
- 35. Kranz Anatomy is seen in
 - (A) C_3 plants
 - (B) C₄ plants
 - (C) CAM plants
 - (D) C_3 and C_4 Plants
- 36. Source of CO₂ during daytime in CAM plants is
 - (A) Oxalo acetic acid
 - (B) 3-PGA
 - (C) Malic acid
 - (D) Pyruvate

SM-29580-A

- Complete oxidation of One molecule of Palmitic acid (16 C) through ß oxidation spiral and TCA cycle results in net gain of
 - (A) 300 ATP molecules
 - (B) 129 ATP molecules
 - (C) 100 ATP molecules
 - (D) 50 ATP molecules
- 38. Linoleic acid is an example of
 - (A) Unsaturated fatty acid
 - (B) Saturated fatty acid
 - (C) Neutral fatty acid
 - (D) Saturated fats
- 39. Ergosterol is also a part of the
 - (A) Viral cell membrane
 - (B) Bacterial cell membrane
 - (C) Fungal cell membrane
 - (D) Protozoal cell membrane
- 40. A class of lipids that serves as a major structural component of the cell membrane is
 - (A) Waxes
 - (B) Steroids
 - (C) Triglycerides
 - (D) Phospholipid
- 41. Which among the following is a Globular protein having a compact shape ?
 - (A) Myoglobin
 - (B) Keratin
 - (C) Collagen
 - (D) Elastin

Which among the following is not a conjugated 47. Fruit colour in Summer Squash shows dominant 42. protein ? epistasis with a phenotypic ratio of F_2 generation as (A) Lipoprotein (A) 9:3:4 (B) Complete protein (B) 9:3:1 (C) Nucleoprotein (C) 12:3:1 (D) Glycoprotein (D) 12:3:4 43. Captopril, the first useful antihypertensive drug that The number of base pairs per turn in the Z DNA are 48. acts by binding to Angiotensin Converting Enzyme is (A) 12 а (A) Irreversible inhibitor **(B)** 11 (B) Noncompetitive enzyme inhibitor (C) 10 (C) Competetive enzyme inhibitor (D) 05 (D) Blocking inhibitor 49. Which of the following events occur in a Lac The non protein component of the holoenzyme is 44. Operon when lactose levels are high and glucose levels called are low? (A) Apoenzyme (A) cAMP levels decrease, triggering binding of (B) Co-factor CAP to RNA polymerase. (C) Conjugated Enzyme (B) cAMP activates CAP which binds to the lac (D) Supported enzymes promoter. 45. Complementary genes in Lathyrus odoratus were (C) cAMP activates CAP which binds to lac first studied in1906 by repressor proteins. (A) Bateson and Punnet (D) CAP binds to the ribosome to prevent (B) Mendel and Morgan translation. (C) Bateson and Mendel In Eukaryotes, the regulatory sequences that stimulate 50. (D) E. Baur transcription even though located several base pairs Partial deletion of the short arm of chromosome 5 46. upstream or downstream of the promoter are called causes (A) Insulators (A) Edward's Syndrome (B) Enhancers (B) Down's Syndrome (C) Promoters (C) Klinefelter's Syndrome (D) Regulators (D) Cri-du-chat Syndrome

SM-29580-A

6 ■ 51. In the E.coli RNA polymerase holoenzyme the 56. initiation of transcription is controlled by

- (A) Core enzyme
- (B) Alpha factor
- (C) Beta factor
- (D) Sigma factor
- 52. The World Biofuel Day is celebrated on
 - (A) 10 th August
 - (B) 20th September
 - (C) 15 th December
 - (D) 13 th November
- 53. Which among the following is not a sedimentary nutrient cycle ?
 - (A) Calcium
 - (B) Phosphorous
 - (C) Nitrogen
 - (D) Magnesium
- 54. The annual amount of carbon fixed in photosynthesis and changed to organic compounds is
 - (A) 24×10^{13} Kg
 - (B) $4 \times 10^{13} \text{ Kg}$
 - (C) 40×10^{13} Kg
 - (D) $4 \times 10^{31} \text{ Kg}$
- 55. Identify the free living Diazotroph :
 - (A) Clostridium
 - (B) Azotobacter
 - (C) Rhizobium
 - (D) Frankia

- Which among the following has the highest Global Warming Potential?
 - (A) Oxygen
 - (B) Carbon monoxide
 - (C) Water Vapour
 - (D) Sulphur Hexafluoride
- 57. In Paper Chromatography, amino acids are detected by spraying the chromatogram with
 - (A) Ninhydrin solution in acetone
 - (B) Water
 - (C) Sulphuric acid
 - (D) Benzene
- 58. The working of a Spectrophotometer is based on
 - (A) Henry's law
 - (B) Charles' law
 - (C) Beer Lambert's Law
 - (D) Heinrich Lambert Law
- 59. Which method uses pulses of high voltage for efficient genetic transformation ?
 - (A) Particle gun
 - (B) Particle bombardment
 - (C) Microprojectiles
 - (D) Electroporation
- 60. This bacteria is also known as natural genetic engineer of plants :
 - (A) Agrobacterium tumefaciens
 - (B) Staphylococcus aureus
 - (C) Thiobacillus coccus
 - (D) Streptococcus bacillus

SM-29580-A

ROUGH WORK
\square					Sr. No	•••••		
		ENTR	ANCE TE	ST-202 1	l			
		SCHOO	DL OF SOCIAL S	SCIENCES				
	ANTHROPOLOGY							
Total Questions : 60								
TimeA	Allowed :	70 Minutes		Roll No. :				
		l	Instructions for Candid	ates :				
1.			umber in the space provid tion in the spaces provid				Booklet	
2.	making entri	es in the Original C	inal Copy and a Candid opy, candidate should en riginal Copy against eac	sure that the two	copies are a	aligned p	oroperly	
3.	All entries in Copy only.	the OMR Answer S	heet, including answers	to questions, are to	o be recorde	ed in the (Original	
4.	Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.							
5.		Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.						
6.		n more than one circ ll be considered wro	le of options for any ques	stion. A question v	with more th	an one d	arkened	
7.		e 'Negative Marki r s from the total scor	ng' for wrong answers. E e of the candidate.	each wrong answe	er will lead	to the de	duction	
8.	Only those conformation of the formation of the second sec		d obtain positive score in	n Entrance Test E	xamination	shall be	eligible	
9.	Do not make	any stray mark on th	ne OMR sheet.					
10.	Calculators a	and mobiles shall no	t be permitted inside the	examination hall				
11.	Rough work,	, if any, should be do	one on the blank sheets pr	rovided with the c	question boo	oklet.		
12.	OMR Answe will not be e		dled carefully and it show	uld not be folded	or mutilated	l in whic	h case it	
13.	Ensure that y herself.	your OMR Answer	Sheet has been signed b	by the Invigilator	and the car	ndidate	himself/	
14.	At the end of the original C	the examination, ha MR sheet in presence	nd over the OMR Answe e of the Candidate and ha	r Sheet to the invi nd over the Candi	gilator who date's Copy	will first to the ca	t tear off indidate.	
SS-542	6-A		1 0			[Tı	urn over	

- 1. Cultural Anthropology Studies:
 - (A) Cultural variations and universals in the past and present
 - (B) Cultural variations and universals in the past
 - (C) Cultural variations and universals in the present
 - (D) Cultural variations in the past
- 2. The Book "Primitive Culture" is written by:
 - (A) Franz Boas
 - (B) L.H. Morgan
 - (C) E.B. Tylor
 - (D) Ruth Benedict
- 3. Who has coined the term "Anthropologist"?
 - (A) Kant
 - (B) Aristotle
 - (C) Herskovits
 - (D) Kluckhohn
- 4. Acculturation is:
 - (A) When there is exchange of cultural traits and complexes
 - (B) When there is a reaction to the loss of own individuality
 - (C) When a whole way of life is in process of change under the influence of another culture
 - (D) None of these
- 5. The concept of "Themes" is given by:
 - (A) M E Opler
 - (B) E B Tylor
 - (C) Kluckhohn
 - (D) Ruth Benedict
- 6. The concept of "Little Tradition" and "Great Tradition" is first introduced by:
 - (A) Mckim Marriott
 - (B) Oscar Lewis
 - (C) Robert Redfield
 - (D) M N Srinivas

- 7. The process by which individuals learn the culture of their society is called:
 - (A) Acculturation
 - (B) Socialization
 - (C) Transculturation
 - (D) Assimilation
- 8. Every society contains a large number of guidelines which direct conduct in particular situations. These are called:
 - (A) Values
 - (B) Norms
 - (C) Mores
 - (D) Folkways
- 9. Which of the following is an achieved status?
 - (A) Sex
 - (B) Caste
 - (C) Class
 - (D) Age
- 10. Family is an:
 - (A) Institution
 - (B) Association
 - (C) Both (A) and (B)
 - (D) None of these
- 11. Hypergamy is also known as:
 - (A) Anuloma
 - (B) Pratiloma
 - (C) Gotra
 - (D) None of these
- 12. Family of Procreation is:
 - (A) Family in which one is born
 - (B) Family which one sets up after marriage
 - (C) Family in which one lives for their whole lives
 - (D) None of these

SS-5426-A

- 13. The Book "Golden Bough" is written by:
 - (A) R H Lowie
 - (B) Radcliffe Brown
 - (C) James Frazer
 - (D) Emile Durkheim
- 14. The study of Animism was pioneered by:
 - (A) Max Mueller
 - (B) E.B. Tylor
 - (C) Radcliffe Brown
 - (D) Evan Pritchard
- 15. The Book "Caste and Class in India" is written by:
 - (A) Hutton J.H.
 - (B) Lowie R.H.
 - (C) Maciver R.M.
 - (D) Ghurye G.S.
- 16. The term "Jajmani System" has been introduced by:
 - (A) S.C Dube
 - (B) William Wiser
 - (C) G.S. Ghurye
 - (D) Louis Dumont
- 17. Second Wave of Feminism is also known as:
 - (A) Liberal feminism
 - (B) Post modern feminism
 - (C) Radical feminism
 - (D) Black feminism
- 18. Empowerment refers to:
 - (A) Ability to fight for rights
 - (B) Ability to take part in decision making
 - (C) Access to all resources
 - (D) All of these
- 19. The founder of Brahmo Samaj Movement in Calcutta (now Kolkata) in 1828 is:
 - (A) Swami Dayanand Saraswati
 - (B) Sir Syed Ahmad Khan
 - (C) Ram Mohan Roy
 - (D) Mahatma Gandhi

- 20. Charles Darwin wrote "Origin of Species" in:
 - (A) 1870
 - (B) 1860
 - (C) 1859
 - (D) 1853
- 21. The process of learning of behaviour and attitudes appropriate for a given sex is called:
 - (A) Androcentrism
 - (B) Gender displays
 - (C) Gender socialisation
 - (D) Gender roles
- 22. Nancy Chodorow is the author of:
 - (A) City of Ladies
 - (B) The Second Sex
 - (C) Vindication of the Rights of Women
 - (D) The Reproduction of Mothering
- 23. Meeting the needs of the present generation without compromising the needs of future generations:
 - (A) Economic Development
 - (B) Sustainable Development
 - (C) Social Development
 - (D) Human Development
- 24. Harappan Culture existed during:
 - (A) Stone Age
 - (B) Bronze Age
 - (C) Iron Age
 - (D) None of these
- 25. Article 25 of the Indian Constitution guarantees:
 - (A) Freedom of Religion
 - (B) Safeguards against Arbitrary Arrest and Detention
 - (C) Freedom of Conscience
 - (D) Freedom of Association

SS-5426-A

[Turn over

- 26. The Indigo Revolt took place in:
 - (A) 1856-57
 - (B) 1851-52
 - (C) 1859-60
 - (D) 1870-71
- 27. What is a Secular State ?
 - (A) Has no religion of its own
 - (B) Cabinet
 - (C) Constituent Assembly
 - (D) Parliament
- 28. Freedom of Speech is linked to:
 - (A) Article 19
 - (B) Article 24
 - (C) Article 14
 - (D) Article 32
- 29. The phrase "Survival of the Fittest" was coined by:
 - (A) J S Mill
 - (B) Herbert Spencer
 - (C) Charles Darwin
 - (D) None of these
- 30. International Women's Day is celebrated every year on:
 - (A) January 13
 - (B) March 8
 - (C) May 16
 - (D) April 10
- 31. Bourgeois is used to refer to:
 - (A) Peasant
 - (B) Capitalist
 - (C) Socialist
 - (D) Liberal
- 32. Karl Marx uses the term Infrastructure for:
 - (A) Culture
 - (B) Religion
 - (C) Economic Relations
 - (D) Kinship
- SS-5426-A

- 33. Deforestation causes:
 - (A) Soil Erosion
 - (B) Flooding
 - (C) Global Warming
 - (D) All of these
- 34. Pollution coming from one country to another is called:
 - (A) Trans boundary Pollution
 - (B) Accidental Pollution
 - (C) Chronic Pollution
 - (D) None of these
- 35. In 1873, he organised an association called the "Satyashodhak Samaj" and asked his followers not to engage any Brahman priest in the said association:
 - (A) B R Ambedkar
 - (B) Jyotiba Phule
 - (C) Mahatma Gandhi
 - (D) Sahajanand Saraswati
- 36. Kinship based on marriage is called:
 - (A) Consanguineous Kinship
 - (B) Primary Kinship
 - (C) Tertiary Kinship
 - (D) Affinal Kinship
- 37. Who was the last Viceroy of India?
 - (A) Lord Ripon
 - (B) Lord Lytton
 - (C) Lord Curzon
 - (D) Lord Mountbatten
- 38. Scheduled Castes constitute _____ percent of total population in India as per 2011 Census.
 - (A) 16.6
 - (B) 17.6
 - (C) 18.6
 - (D) 10.6
- 4 0

- 39. The five point Charter (PANCHSHEEL) for tribal 44. people is founded by:
 - (A) B R Ambedkar
 - (B) Jawaharlal Nehru
 - (C) Mahatma Gandhi
 - (D) A.V. Thakkar
- 40. The first National Forest Policy after independence was formulated in:
 - (A) 1952
 - (B) 1949
 - (C) 1953
 - (D) 1951
- 41. The _____ was largely against the feudal conditions in the princely state of Hyderabad.
 - (A) Tebhaga Movement
 - (B) Telangana Movement
 - (C) Naxalbari Movement
 - (D) None of these
- 42. Sachar Committee Report mainly addresses:
 - (A) Economic and Political conditions of Indians
 - (B) Educational and Economic condition of Dalits
 - (C) Educational and Economic condition of Muslims
 - (D) None of these
- 43. The term used to describe the ethnic diversity that exists everywhere in the world today:
 - (A) Cultural Identity
 - (B) Cultural Construct
 - (C) Culturalism
 - (D) Multiculturalism

- . _____ is an intensive study of a case which may be an individual, an institution, a system, a community, an organization, an event or even entire culture.
 - (A) Survey method
 - (B) Case Study method
 - (C) Interview method
 - (D) Pilot Study
- 45. When the purpose of research is to describe the culture and lifestyle of the group of people in their living habitat it is called:
 - (A) Social Surveys
 - (B) Questionnaire
 - (C) Ethnography
 - (D) None of these
- 46. Who is the author of the book "Daughters of The Vitasta"?
 - (A) P N Bazaz
 - (B) Walter Lawrence
 - (C) T N Madan
 - (D) Ram Krishan Koul
- 47. Deficiency of _____ causes dry skin and night blindness.
 - (A) Vitamin D
 - (B) Vitamin C
 - (C) Vitamin A
 - (D) Vitamin E
- 48. In Social Science Research, the term used to designate a representative portion of the whole population is:
 - (A) Universe
 - (B) Sample
 - (C) Sampling

50

 $(D) \quad None \ of \ these$

SS-5426-A

[Turn over

49.		lacks nucleus and membrane bound
	orga	nelles.
	(A)	Mitochondria
	(B)	Prokaryotic
	(C)	Eukaryotic
	(D)	None of these
50.	Whi	ch is the largest gland of human body?
	(A)	Liver
	(B)	Pancreas
	(C)	Pineal gland
	(D)	Thyroid gland
51.	Tota	ll Number of High Courts in India is:
	(A)	20
	(B)	25
	(C)	26
	(D)	28
52.	NIT	I Aayog came into existence on:
	(A)	1 st January 2015
	(B)	3 rd December 2015
	(C)	4 th May 2014
	(D)	6 th November 2016
53.		was launched on 2 nd April 2005 to
	redu	ice Infant Mortality Rate and Maternal
		tality Rate.
		NUHM
	(B)	MGNREGA
	(C)	NRHM
		Bharat Nirman
54.		Marriage of one man to several women is
		rred to as:
		Polyandry
	(B)	Polygamy

- (C) Hypogamy
- (D) Polygyny
- SS-5426-A

- lacks nucleus and membrane bound 55. The practice of calling Husband by Son's name is:
 - (A) Teknonymy
 - (B) Avoidance
 - (C) Amitate
 - (D) Couvade
 - 56. Pradhan Mantri Awas Yojana (PMAY), a centrally sponsored Scheme, was launched in:
 - (A) 2012
 - (B) 2013
 - (C) 2014
 - (D) 2015
 - 57. Saiyid Sharafuddin (Bulbul Shah) was in Kashmir during the reign of :
 - (A) Lalitaditya
 - (B) Rinchan Shah
 - (C) Sultan Zainulabidin
 - (D) Emperor Akbar
 - 58. The concept of Dysfunction is given by:
 - (A) Talcott Parsons
 - (B) Herbert Spencer
 - (C) R K Merton
 - (D) Emile Durkhiem
 - 59. postulated three stages (Savage Society, Barbarism, and Civilisation) to understand cultural evolution.
 - (A) Tylor
 - (B) Morgan
 - (C) Radcliffe Brown
 - (D) Lévi-Strauss
 - 60. In Ancient Kashmir, Nila was the King of:
 - (A) Nagas
 - (B) Pisachas
 - (C) Both (A) and (B)
 - (D) None of these
 - 6 0

is

ROUGH WORK

	estar in terr	international de la contra	Historia 198 A.F.		Sr. I	No	0	08	
		ENTRA	ANCE TES	ST-202	0				
		SCHOOI	OF SOCIAL S	CIENCES	eh are				
) Nat Move	A	NTHROPOLOG	GY	i D	11.46			
Total Q Time A	Questions : llowed :	60 70 Minutes	 (E) 7. Which is 1 (B) 7. Karakoran (O) 	Ques Roll No.		ooklet S	series]
1.	Write your Entr fill up the neces	anao Tast Poll Numb	etructions for Candidater in the space provided on the space provided on the spaces provided on the space provided on the sp	at the top of th	is page er Sheet	of Ques	tion Bo	oklet and	
2.		i al Carry agedid	Copy and a Candidate's ate should ensure that a ainst each item are exact	ne IMO CODIES	alcall	2110 U DI	JUCITY O	e making o that the	50.02
	only.		, including answers to q						
4.	doulson the aire	lo of the annronriate	ate response for each q response completely. T mplaint to this effect sh	ne incomplet	uainci	otions A ned circ	, B, C a le is not	nd D and correctly	t y
5.	Use only blue, gel/ink pen or j	black ball point pen bencil should be used	to darken the circle of	correct/most a	ppropr	iate res	ponse. I	n no cas	e
6.	Do not darken response shall	more than one circle be considered wrong	of options for any que	stion. A questi	on with	more tl	nan one	darkene	d
7.	0.25 marks fro	om the total score of t							
8.	Only those can admission.	ndidates who would o	obtain positive score in	Entrance Test	Examir	nation sl		ligible fo	or
9.	Do not make a	any stray mark on the	OMR sheet.						
10). Calculators an	d mobiles shall not be	permitted inside the exa	amination hall.					
			on the blank sheets pro						
	be evaluated.		d carefully and it should						
			et has been signed by th						
14	4. At the end of a original OMI	the examination, hand R sheet in presence of	l over the OMR Answer the Candidate and hand	Sheet to the ir d over the Can	vigilato didate's	or who w Copy to	vill first o the car	tear off th ndidate.	he
11 25	6-D		1					[Turn ov	/er

800 is used as an analytical category to 6. draw a line of demarcation between sex difference and the way these are used to inform behaviours and competencies which are then assigned as masculine or feminine.

(A) Feminism

1.

- (B) Gender order
- (C) Gender

(D) Heterosexism

- Who has concluded that the family is a universal 2. institution after studying 250 societies ?
 - (A) George Peter Murdock
 - (B) Chester L. Hunt
 - (C) Bronislaw Malinowski
 - (D) Radcliffe Brown
 - The normative system presents the society with : 3.
 - (A) Norms
 - (B) Ideals
 - (C) Values
 - (D) All of the above

In 1864, Sir Syed Ahmad Khan founded : 4.

- (A) The Muslim Society
- (B) Translation Society
- (C) Minority Society
- (D) Educational Society

is used to describe the dominance of

men over women, a dominance which appears in several quite different kinds of society.

- (A) Patrilineal
- (B) Patrilocal
- (C) Patriarchy
- (D) Exogamy

An individual looking at other culture in terms of standards of one's own culture is called

(A) Xero-centrism

(B) Ethnocentrism

- (C) Cultural relativism
- (D) Acculturation

7.

Which is the largest glacier in the Himalayas

Karakoram region ?

(A) The Lady of Keylong

(B) Tayseer Glacier

- (C) Siachen
- (D) Nun Kun
- Who was the first Indian nationalist to embra Swaraj as the destiny of the nation?
 - (A) Bal Gangadhar Tilak
 - (B) Sir Syed Ahmad Khan
 - (C) Subash Chandra Bose
 - (D) Jawaharlal Nehru
- Social sanctions are the enforcement mechani 9.
 - for
 - (A) Values
 - (B) Norms
 - (C) Agency
 - (D) Habits
 - 10. The Quit India Movement comme

on

2

- (A) 08 August 1942
- (B) 08 August 1943
- (C) 15 August 1947
- (D) 15 August 1944
- Who has authored "Indian Village"? 11.
 - (A) S.C. Dube
 - (B) M.N. Srinivas
 - (C) Evans Prichard
 - (D) Ramchandra Guha

JJ-356-D

5.

12.	was started by Ambedkar in 1924 18	3	A Phratry is composed of several		
	to create a separate, dignified socio-political identity	(A) Tribes			
	of untouchables.		(B) Sibs		
	(A) Satyashodhak Movement		(C) Villages		
	(B) Mahar Movement				
	(C) Quit India Movement		(D) Clans		
	(D) Niar Movement		was the first Viceroy of India.		
13.	Which among the following concepts is fundamental		(A) Lord Canning		
	to the caste system ? (A) Regulation		(B) Lord Mountbatten		
	(A) Regulation(B) Pollution		(C) Lord Chelmsford		
	(C) Prohibition		(D) Lord Irwin		
	(D) Commensality 20	0.	Abolition of Sati was the greatest achievement		
14.	For Marx, when groups of people become aware		of :		
	of their conflicting relations with other groups, they		(A) Telangana Movement		
	are a class :		(B) Indian National Movement		
	(A) For itself				
	(B) In itself		(C) Brahmo Samaj		
	(C) By itself		(D) Arya Samaj		
		1.	The theoretical framework known as cultural		
15.	Deriving from the Greek word for male, andro-		relativism has been propagated by :		
	centrism literally means :(A) A doctrine of male centeredness		(A) Ruth Benedict		
	(B) A doctrine of female centeredness		(B) Evans Prichard		
	(C) A doctrine of third gender		(C) Radcliffe Brown		
	(D) None of the above		(D) Franz Boas		
16.	A socially defined marital relationship would be 2	2.	Which article of the Indian Constitution says that		
	termed :		directive principles are not enforceable by any		
	(A) Consanguineous kinship		court ?		
	(B) Affinal kinship				
	(C) Primary kinship		(A) Article 36		
	(D) Secondary kinship		(B) Article 37		
17.	Who among the following has identified the		(C) Article 38		
	propertied class, the intelligentsia, the petty-		(D) Article 39		
	bourgeoisie class, the working class as four main 2 classes in industrial societies ?	3.	Cross cultural studies are an example of :		
	(A) Louis Dumont		(A) Comparative design		
	(B) Karl Marx		(B) Case study		
	(C) Max Weber		(C) Experimental design		
	(D) George Simmel		(D) Longitudinal design		

3

JJ-356-D

[Turn over

24. Which of the following is the member-state of The 30. South Asian Association for Regional Cooperation (SAARC)?

- (A) Afghanistan
- (B) Iran
- (C) Iraq
- (D) Saudi Arabia
- 25. The systematic study of humans as biological organisms is known as :
 - (A) Cultural Anthropology
 - (B) Physical Anthropology
 - (C) Linguistic Anthropology
 - (D) Archaeology
- 26. Who is the current Chairman of Rajya Sabha?
 - (A) M. Venkaiah Naidu
 - (B) K.R. Narayanan
 - (C) Gajendra Prasad
 - (D) Bhairon Singh Shekhawat
- 27. 'Arya Samaj' a reform movement of modern Hinduism was founded in 1875 by _____.
 - (A) Raja Ram Mohan Roy
 - (B) Mohan Das Saraswati
 - (C) Swami Vivekananda
 - (D) Dayananda Saraswati
- 28. In India, at the commencement of the first session after each general election to Lok Sabha, ______ 34. addresses both Houses of Parliament assembled together and informs Parliament of the causes of its summons.
 - (A) President
 - (B) Prime Minister
 - (C) Speaker
 - (D) Vice President

locality is considered to be Asia's largest

slum.

JJ-356-D

29.

- (A) Nochikuppam Slum
- (B) Bhalswa Slum
- (C) Saroj Nagar Slum
- (D) Dharavi Slum

Which of the following committees was constituted for Panchayat Raj in India?

- (A) Balwant Rai Mehta Committee
- (B) Justice Verma Committee
- (C) Both of these
- (D) None of the above
- 31. Who said "Culture or civilization taken in its wide ethnographic sense is that complex whole which includes knowledge, belief, art, law, morals, custom and any other capabilities and habits acquired by man as a member of society"?
 - (A) E.B. Tylor
 - (B) Evans Prichard
 - (C) Bronislaw Kasper Malinowski
 - (D) Alfred Kroeber
- 32. The right to equality is an important right provided in of the constitution.
 - (A) Articles 14-18
 - (B) Articles 19-22
 - (C) Articles 23-24
 - (D) Articles 32-35
 - 33. The United Nations officially came into existence on
 - (A) 24th April, 1954
 - (B) 24th October, 1945
 - (C) 1st August, 1955
 - (D) 1st September, 1935
 - 34. Which of the following has contributed toward Kashmir Shaivism?
 - (A) Louis Dumont
 - (B) Abhinavagupta
 - (C) T.N. Madan
 - (D) B.R. Ambedkar
 - 35. MGNREGA aims to enhance livelihood a security in rural areas by providing at least ______ of wage employment in a financial year to evo household whose adult members volunteer to unskilled manual work.
 - (A) 365 days
 - (B) 200 days
 - (C) 165 days
 - (D) 100 days

4



36. Which of the following countries is not the me of the 'Association of Southeast Asian National Contract of Southeas		The	Santhal revolt took	place in :	
		(A)	1888-89		
(A) Indonesia (B) Malaysia		(B)	1855-56		
(C) Singapore		(C)	1866-67		
(D) Nepal		(D)	1890-91		
37. Which of the following is a Neolithic settlem	nent? 43.	The	most widely spoke	n language in Jamm	nu and
(A) Mehrgarh			hmir is :		sma?
(B) Jhusi		(A)	Kashmiri		
(C) Both of these		(III) (B)	Dogri		
(D) None of the above	(8)				
88. Frederic Le Play first introduced the case-		(C)	Punjabi		
method into social science as a handmaid		(D)	Balti		
statistics in his studies of :	44.	Who	is the author of "Th	e Valley of Kashmir"	?
(A) Poverty level(B) Neighbourhood relations		(A)	Louis Dumont		
(C) Marriage bonds		(B)	Walter Lawrence	vith a common cultur	
(D) Family budgets		(C)	T.N. Madan		
9. Which of the following is a compone	nt of	(D)	Fazil Kashmiri		
ethnographic research ?	45.	Larg	est urban agglomerat	ion in India by popula	tion i
(A) Being out of the social group or setting			d in	Extended Supily	
 (B) Participant observation, interviews, a documentary analysis 	ind/or	(A)	Chennai		
(C) E-mail the questionnaire to the respond	lents	(B)	Bangalore		
(D) All of the above		(C)	Delhi		
0. What is a research design ?		(D)	Mumbai		
(A) A way of conducting research that i grounded in theory	s not 46.		nmir Shaivism is a		
(B) The choice between using qualitation	ve or		oording to. Commission		
quantitative methods		(A)	Shaiva Siddhanta		
(C) The style in which you present your res	earch	(B)	Lakula Atimargi		
findings, e.g. a graph		(C)	Trika Shaivism		
(D) A framework for every stage of the colle	ection	(D)	Tantra Diksha tradit	ions	
and analysis of data	47.	Ach	romosome is a	molecule with	n part
1. There are around distinct tribes in	here are around distinct tribes in India			l (genome) of an orga	
recognized by the Constitution.			DNA	sarow Sarwonoi Su	
(A) 406(B) 546		(H) (B)			
(()) 1(5					
(C) 465 (D) 645			Mitochondria None of the above		
IJ-356-D		(-)			
	5			100	over

24.	48. The prominent work titled "Ancient Society" has 54 is also known by the name of 'Stone Age'.
24.	Diolio 1 50 ·
	been written by: (A) Mesolithic Age
	(A) L.H. Morgan (B) Neolithic Age
	(B) Herbert Spencer (C) Paleolithic Age
	(C) Charles Darwin (D) None of the above
	(D) Auguste Comte 55. The terms "Paleolithic" and "Neolithic" were
	49. Ramakrishna Mission, a Hindu religious society was introduced by in his work
25.	founded in Pre-historic Times in 1805.
	(A) John Lubbock
	(B) 1877 (B) Edouard Field
	(C) 1887
	(D) Kliut Stjerna
	the statistic structure of the structure
26.	in the internet religious or blood
	1 1 Lielestic colled 3.
	(A) moe
	(b) Our group
27.	(C) Totelli (D) Fredrik Engels
	(D) Extended family
	51. In India, Census is undertaken alter every
-	years. 58. The family in which one is born and reared is called
	(A) Ten as:
	(B) Eleven (A) Family of orientation
28.	(C) Five (B) Family of procreation
	(D) Twenty (C) Joint family
	52. The sex ratio of India according to Census of India (D) Extended family
	2011 is 59. Malinowski sought an alternative to .
	(A) Evolutionism
	(B) 995 (B) Diffusionism
	(C) Historical Reconstruction
	(D) 940 (D) All of the above
	The stability of the st
29	
	The second History () It's his system
	(C) Societal Norm
	(C) Arrochering (D) Cultural Trait
	(D) On the Origin of Species (D) Cultural Trait
	6
J.	JJ-356-D