

Choose the correct answers for the following questions**Time allotted 1 hr**

1. Which of the following is a basic assumption of science?
 - A. Science can answer all questions
 - B. Scientific ideas are fixed
 - C. Nature can never be understood
 - D. Scientific ideas are open to revision
2. HIV A. is the human immunodeficiency virus B. is the result of the AIDS virus
C. results from low T cell levels D. all of the above
3. Structures that are similar in unrelated organisms are called
A. analogies B. homologies C. acquired characteristics D. vestigial structures
4. An antibiotic produced by a fungus is
A. aspirin B. penicillin C. acetaminophen D. all of the above
5. The reproductive system in both males and females consists of A. reproductive cells
B. structures that produce reproductive cells C. structures that secrete sex hormones D. all
6. Gametes a. are reproductive cells b. are haploid cells c. combine during fertilization d. all
7. Products of photosynthesis include a. carbon dioxide b. oxygen c. energy d. water
8. The chlorophyll a molecule in photosystem II and photosystem I are most active with light of a wavelength of ----- and ----- respectively.
 - A. 680 nm (P680) and 700 nm (P700)
 - B. 700 nm (P700) and 680 nm (P680)
 - C. 680 nm (P680) and 680 nm (P680)
 - D. 700 nm (P700) and 700 nm (P700)
9. Which statement is true concerning spermatogenesis?
 - A. Sperm are produced in the epididymis of the testes and become mature in the seminiferous tubules
 - B. Spermatogenesis takes about 9 to 10 days to complete
 - C. Spermatogonia are haploid, sperm-producing cells
 - D. Spermatogonia lining the seminiferous tubule undergo mitosis to form primary spermatocytes
10. Functions of the female reproductive system include A. delivering a baby during birth
B. supporting the development of a fetus C. breast feeding a baby after birth D. all of the above

11. If fertilization is to take place, it will occur
 A. in the uterus B. in the vagina C. in a fallopian tube D. in an ovary
12. Menopause A. is a period during which a menstrual cycles slow down and eventually stop
 B. usually occurs by the early fifties C. occurs and women can no longer reproduce naturally
 D. all of the above
13. Which of the following stages in respiration occurs in the cytoplasm of the cell?
 A. Krebs cycle B. Glycolysis C. Transition reaction D. Electron transport chain
14. Structures found in all living cells include
 A. a nucleus B. ribosomes C. mitochondria D. chloroplasts
15. The movement of a substance across a membrane from a higher to a lower concentration is called
 A. cellular transport B. active transport C. exocytosis D. diffusion
16. All organisms that consume other organisms are referred to as
 A. producers B. autotrophs C. decomposers D. heterotrophs
17. Which of the following organism produce CO_2 and ethanol from glucose molecule by fermentation?
 A. Animals B. Bacteria C. Protozoa D. Yeast
18. The last stage of aerobic respiration is
 A. the light reaction B. the Krebs cycle C. the Calvin cycle D. electron transport
19. Compared with aerobic respiration, anaerobic respiration A. is much faster
 B. produces more ATP C. requires more oxygen D. occurs in more organisms
20. Mendel crossed a purple-flowered pea plant with a white-flowered pea plant. What color were the flowers of the first generation of offspring?
 A. purple B. white C. pink D. purple and white
21. The process by which unrelated organisms evolve similar structures, adapted for the same function is
 A. Convergent evolution B. Divergent evolution
 C. Allopatric speciation D. Sympatric speciation

22. The ABO blood type gene has three common alleles. How many possible phenotypes are there? A. three B. four C. six Ds. nine
23. The backbone of a polynucleotide chain of DNA or RNA consists of alternating
A. amino acids B. sugars and phosphates C. base pairs D. codons
24. The process that produces two DNA molecules identical to an original DNA molecule is called DNA A. synthesis B. translation C. replication D. recombination
25. A person with Turner's syndrome has the genotype A. XX B. XY C. XO D. XXY
26. Which statement is true of the relationship between HIV and AIDS? A. AIDS causes HIV
B. HIV causes AIDS C. HIV and AIDS are not related D. HIV and AIDS are the same disease
27. The evolution of Darwin's finches is an example of
A. directional selection B. adaptive radiation C. sympatric speciation D. coevolution
28. All the genes in a population make up A. genotype B. gene pool C. phenotype D. genome
29. Prokaryotes that live in extreme environments belong to the domain
A. Bacteria B. Eukarya C. Protista D. Archaea
30. Prokaryotes that get energy from compounds and obtain carbon from the air are classified as
A. photoautotrophs B. chemoheterotrophs C. chemoautotrophs D. photoheterotrophs
31. A virus consists of a protein coat and
A. DNA or RNA B. a lipid membrane C. cytoplasm D. a flagellum
32. The outer layer of the skin contains
A. melanocytes B. nerves C. blood vessels D. sweat glands
33. What type of neuron carries nerve impulses from the central nervous system to glands?
A. sensory neuron B. motor neuron C. glandular neuron D. interneuron
34. A lichen is A. a mutualistic relationship between a fungus and a photosynthetic organism
B. a parasitic relationship between a plant and a fungus
C. a mutualistic relationship between an animal and a fungus

- D. a parasitic relationship between a plant and an animal
35. HIV can be transmitted A. through unprotected sex B. through infected needles
C. from mother to baby during milk feeding D. all of the above
36. Giardiasis is spread by
A. the air B. contaminated blankets C. contaminated water D. all of the above
37. In vascular plants _____ transports sugars from photosynthetic tissues to the rest of the plant
A. xylem B. phloem C. cotyledons D. sepal
38. Pyruvate is converted to acetyl Coenzyme A with the loss of CO_2 and the production of 2NADH in A. Krebs cycle B. Glycolysis C. in ETC D. the link reaction
39. Structures found in plant cells, but not animal cells, include
A. a large central vacuole B. plastids C. a cell wall D. all of the above
40. One of the following factors that increases the size of population?
A. Immigration B. Emigration C. Mortality D. Predation
41. To which genus does Lucy belongs:-
A. *Ardipithecus* B. *Australopithecus* C. *Homo* D. *Mangifera*
42. The bacteria that reduce the amount of available nitrogen in the soil is:
A. *Rhizobium* B. *Pseudomonas* C. *Acetobacter* D. *Nitrobacter*
43. Compared with Gram positive bacteria, Gram negative bacteria:
A. are stained purple by Gram's stain B. has thick peptidoglycan in their cell wall
C. produce endotoxin D. lack a membrane outside of the peptidoglycan cell wall

Answer the Following Questions based on the table given

Sense of the skin	Receptor	
X	Meissners corpuscles	
Pressure	Y	
Temperature	Z	
W	Noci receptors	

44. The letter “X” indicates the types of sense called
A. Touch B. Hearing C. Pain D. Temperature
45. The letter “Y” indicates for the type of receptors in the skin
A. Pain B. Pacinian corpuscles C. Thermo receptors D. Chemoreceptors
46. The letter “Z” indicates the types receptors called
A. Light sensitive cells B. Sound sensitive cells C. Thermo receptors D. All
47. The letter “W” tells us the type of senses in the skin called
A. Vision B. Sweating C. Touch D. Pain
48. A unique feature of xylem is that
A. functional xylem is made of dead cells
B. is the only photosynthetic tissue that has no chloroplasts
C. it evolved before nonvascular plants D. it transports water only in a downward direction
49. C₄ photosynthesis is most efficient in condition of the followings, **Except** A. low CO₂ concentration B. High CO₂ concentration C. High temperature D. High light intensity
50. Which of the following is **Not** the protein pumps that are used in the electron transport system A. NAD dehydrogenase B. Ubiquinone C. Rubisco D. Cytochromes
- =====

GRADE 12 BIOLOGY MODEL 1 ANSWER SHEET

NAME _____ Sec. _____ R.No. _____

1 _____ 10 _____ 19 _____ 28 _____ 37 _____ 46 _____

2 _____ 11 _____ 20 _____ 29 _____ 38 _____ 47 _____

3 _____ 12 _____ 21 _____ 30 _____ 39 _____ 48 _____

4 _____ 13 _____ 22 _____ 31 _____ 40 _____ 49 _____

5 _____ 14 _____ 23 _____ 32 _____ 41 _____ 50 _____

6 _____ 15 _____ 24 _____ 33 _____ 42 _____

7 _____ 16 _____ 25 _____ 34 _____ 43 _____

8 _____ 17 _____ 26 _____ 35 _____ 44 _____

9 _____ 18 _____ 27 _____ 36 _____ 45 _____

