



**CENTRAL
UNIVERSITY
COLLEGE**

SCHOOL OF APPLIED SCIENCES

DEPARTMENT OF NURSING

END-OF-FIRST-SEMESTER EXAMINATIONS

NSNG 101: ANATOMY I

LEVEL 100

JANUARY, 2017

STUDENT ID

No.....

INSTRUCTIONS:

- (i) Answer all questions.**
- (ii) All Section A answers must be provided on the question paper.**

**DO NOT TURN OVER THIS PAGE UNTIL YOU HAVE BEEN TOLD TO DO
SO**

BY THE INVIGILATOR

TIME ALLOWED: 2 HOURS

**CU-SAS-DEPARTMENT OF NURSING
END OF FIRST SEMESTER 2016/17 EXAMINATION
NSNG 101 (ANATOMY I)
TIME: 1 HR. 30 MINS
INDEX NUMBER: DATE:**

Answer Section A on the question paper and Section B in the answer booklet

SECTION A (70 Marks)

Circle the most appropriate answer from the four options (a to d) provided.

1. Ribosomes are found in or on
 - a) cell membrane.
 - b) cytoplasm.
 - c) Golgi apparatus.
 - d) smooth endoplasmic reticulum.

2. Which of the following organelles is for ATP production?
 - a) Golgi apparatus
 - b) mitochondrion
 - c) rough endoplasmic reticulum
 - d) smooth endoplasmic reticulum

3. Which of the following organelles is for the synthesis and breakdown of cholesterol?
 - a) Golgi apparatus
 - b) mitochondrion
 - c) rough endoplasmic reticulum
 - d) smooth endoplasmic reticulum

4. Nucleoli are
 - a) gene containing control centres.
 - b) sites for chromosome replication during cell division.
 - c) sites for assembling ribosomes.
 - d) sites for protein synthesis.

5. Cell membranes are composed of
 - a) basement membranes.
 - b) cytoplasm.
 - c) two layers.
 - d) none of the above

6. Microvilli are structured to
- a) increase surface area for absorption.
 - b) interlock with cell membranes of cells.
 - c) move particles over cell surface.
 - d) protect the cell.
7. Cilia are structured to
- a) increase surface area for absorption.
 - b) interlock with cell membranes of cells.
 - c) move particles over cell surface.
 - d) protect the cell.
8. Centrosome contains
- a) centrioles
 - b) chromosomes.
 - c) proteasomes.
 - d) ribosomes.
9. Cristae are folds found in the
- a) cell membrane.
 - b) Golgi apparatus.
 - c) mitochondrion.
 - d) nucleus.
10. Ribosomes are organelles for the
- a) breakdown of proteins.
 - b) neutralization of toxic compounds.
 - c) removal of damaged organelles or of pathogens.
 - d) synthesis of proteins.
11. Which of the following has relatively large pores through which substances can pass more freely?:
- a) cell membrane
 - b) cytoplasm
 - c) Golgi apparatus
 - d) nuclear membrane
12. Which of the following statements is **untrue**:
Some proteins of the cell membrane are
- a) enzymes.
 - b) involved in ribosome production
 - c) involved in transport functions
 - d) receptors for hormones.

13. The four basic types of tissues in the human body are
- a) bone, cartilage, muscle and connective tissues.
 - b) epithelial, connective, muscle and nervous tissues.
 - c) loose connective, dense connective, bone and nervous tissues.
 - d) muscle, cartilage, glandular and connective tissues.
14. Skeletal muscle cells are or have.....
- a) inter-calated discs.
 - b) multi-nucleated
 - c) spindle-shaped.
 - d) none of the above
15. Cardiac muscle cells are or have.....
- a) Inter-calated discs.
 - b) multi-nucleated
 - c) spindle-shaped.
 - d) none of the above
16. Smooth muscle cells are or have.....
- a) inter-calated discs.
 - b) multi-nucleated.
 - c) spindle-shaped.
 - d) none of the above
17. Themuscles are under voluntary control.
- a) Cardiac
 - b) Skeletal
 - c) Smooth
 - d) None of the above
18. The muscles occur in the stomach wall.
- a) Cardiac
 - b) Skeletal
 - c) Smooth
 - d) None of the above
19. The muscles occur in the fallopian tube wall.
- a) Cardiac
 - b) Skeletal
 - c) Smooth
 - d) None of the above

20. The epithelial tissue cells lining the mouth are called cells.
- a) columnar
 - b) cuboidal
 - c) squamous
 - d) transitional
21. At the end of meiosis, each of the four daughter cells has chromosomes.
- a) 23
 - b) 32
 - c) 46
 - d) 64
22. The epithelial tissue cells in the adrenal gland are called cells.
- a) columnar
 - b) cuboidal
 - c) squamous
 - d) transitional
23. Non-keratinized stratified epithelium occurs in the
- a) heart.
 - b) kidneys.
 - c) skin.
 - d) vagina.
24. Keratinized stratified epithelium occurs in the
- a) heart.
 - b) kidneys
 - c) skin.
 - d) vagina.
25. Which of the following is not a connective tissue?
- a) Blood.
 - b) Bone.
 - c) Fat.
 - d) Nerve.
26. The epithelial tissue cells lining the intestines are called cells.
- a) columnar
 - b) cuboidal
 - c) squamous
 - d) transitional

27. The epithelial tissue cells lining the blood capillaries are cells.
- a) columnar
 - b) cuboidal
 - c) squamous
 - d) transitional
28. The epithelial tissue cells lining the kidney tubules are cells.
- a) columnar
 - b) cuboidal
 - c) squamous
 - d) transitional
29. Desmosomes are junctions.
- a) anchoring
 - b) basement
 - c) communicating
 - d) impermeable
30. Tight junctions are junctions.
- a) anchoring
 - b) basement
 - c) communicating
 - d) impermeable
31. Gap junctions are junctions.
- a) anchoring
 - b) basement
 - c) communicating
 - d) impermeable
32. Glial cells that are phagocytic within the central nervous system are.....
- a) astrocytes.
 - b) Ependymal cells
 - c) Microglial cells
 - d) oligodendrocytes.
33. Glial cells that form living barrier between capillaries and neurons within the central nervous system are.....
- a) astrocytes.
 - b) Ependymal cells
 - c) Microglial cells
 - d) oligodendrocytes.

34. Glial cells that line the ventricles of the brain are.....
- a) astrocytes.
 - b) Ependymal cells
 - c) Microglial cells
 - d) oligodendrocytes.
35. Glial cells that wrap around the neurons and form insulating coverings within the central nervous system are.....
- a) astrocytes.
 - b) Ependymal cells
 - c) Microglial cells
 - d) oligodendrocytes.
36. The structure that divides the oral cavity from the nasal cavities is called
- a) conchae.
 - b) palate.
 - c) septum.
 - d) sinus.
37. The structure that divides the two nasal cavities are
- a) conchae.
 - b) palate.
 - c) septum.
 - d) sinus.
38. The vocal cords in the respiratory system occur in the
- a) Bronchus.
 - b) Larynx.
 - c) Laryngopharynx.
 - d) Trachea.
39. The protects the superior portion of the larynx.
- a) Epiglottis
 - b) Glottis
 - c) Tonsil
 - d) Thyroid cartilage.
40. The wall of the.....is reinforced with C-shaped cartilage rings.
- a) Bronchus
 - b) Larynx
 - c) Pharynx
 - d) Trachea

41. How many lobes does the left lung have?
- a) Two.
 - b) Three.
 - c) Four.
 - d) Five.
42. The oropharynx is inferior in location to the
- a) Larynx
 - b) Laryngopharynx
 - c) Nasopharynx
 - d) trachea
43. The Adam's apple forms part of the.....
- a) bronchus.
 - b) larynx.
 - c) pharynx.
 - d) trachea.
44. The lower respiratory tract consists of
- a) lungs, pharynx, and bronchi.
 - b) pharynx, larynx and nasal cavity.
 - c) trachea, bronchi, and lungs
 - d) trachea, pharynx, and nasal cavity
45. The accessory structures of the digestive system include the following:
- a) cecum, salivary glands, kidneys, and pancrease.
 - b) Liver, teeth, pancrease, and salivary glands.
 - c) Pancrease, liver, cecum, and salivary glands.
 - d) Salivary glands, kidneys, liver, and cecum.
46. The three pairs of salivary glands of the digestive system are:
- a) parotid, sub-mandibular, sublingual.
 - b) pharyngeal, parotid, sublingual.
 - c) sub-lingual, parotid, and pituitary.
 - d) sub-mandibular, pharyngeal, and palatine.
47. The..... are the four regions of the stomach.
- a) body, fundus, duodenum, and pylorus
 - b) cardiac, fundus, body, and pylorus
 - c) esophagus, pylorus, fundus, and cardiac
 - d) pylorus, body, duodenum, and cardiac

48. Which of the following prevents food from entering the wind pipe when swallowing?:
- a) Adam's apple
 - b) cardio-esophageal valve
 - c) epiglottis
 - d) tonsils
49. The..... is the body's major digestive organ.
- a) large intestine
 - b) mouth
 - c) small intestine
 - d) stomach
50. The three major subdivisions of the small intestine are:
- a) cecum, duodenum, and ileum.
 - b) cecum, jejunum, and duodenum.
 - c) jejunum, duodenum and colon.
 - d) ileum, jejunum, and duodenum.
51. The three major subdivisions of the large intestine are:
- a) cecum, colon, and rectum
 - b) duodenum, colon, and rectum.
 - c) ileum, cecum, and rectum.
 - d) jejunum, colon, and rectum.
52. The pyloric sphincter is between the
- a) esophagus and the stomach.
 - b) small intestine and the large intestine.
 - c) rectum and the anus.
 - d) stomach and the duodenum
53. The most external layer of the pericardium is the
- a) fibrous pericardium.
 - b) visceral layer of serous pericardium.
 - c) pericardial cavity.
 - d) parietal layer of serous pericardium.
54. All veins above the diaphragm carry blood into the
- a) brachiocephalic trunk
 - b) inferior vena cava
 - c) pulmonary veins
 - d) superior vena cava

55. The right atrium receives blood from the.....
- a) aorta.
 - b) pulmonary artery.
 - c) pulmonary vein.
 - d) vena cavae.
56. The left ventricle pumps blood into the.....
- a) aorta.
 - b) pulmonary artery.
 - c) pulmonary vein.
 - d) vena cavae.
57. Which of the following blood vessels has a semi-lunar valve?
- a) coronary artery.
 - b) pulmonary artery.
 - c) pulmonary vein.
 - d) vena cava.
58. The heart is located in a cavity called
- a) abdominal cavity.
 - b) mediastinum.
 - c) pleural cavity.
 - d) ventral cavity.
59. The leftatrio-ventricular valve consists of cusps or leaflets.
- a) two
 - b) three
 - c) four
 - d) five
60. The heart's ventricles are in position to the atria.
- a) inferior
 - b) lateral
 - c) medial
 - d) superior
61. Blood vessels have three main layers. They are.....
- a) tunica mucosa, tunica media, and tunica externa.
 - b) tunica media, tunica intima, and tunica submucosa.
 - c) tunicaexterna, tunica intima, and tunica capsula.
 - d) tunica intima, tunica media, and tunica externa.

62. The three main arteries that branch off from the top of the aortic arch are:
- a) Brachiocephalic artery, left common carotid artery, and left subclavian artery.
 - b) Left common carotid artery, coronary artery, and left subclavian artery.
 - c) Left subclavian artery, abdominal aorta, and brachiocephalic artery.
 - d) Right subclavian artery, brachiocephalic artery, and right subclavian artery.
63. The phrenic arteries are branches of the
- a) abdominal aorta.
 - b) ascending aorta.
 - c) common iliac artery.
 - d) thoracic aorta.
64. Mitochondria are
- a) circle-shaped.
 - b) cube-shaped.
 - c) funnel-shaped.
 - d) sausage-shaped.
65. Pseudo-stratified epithelium occurs in the system.
- a) circulatory
 - b) digestive
 - c) respiratory
 - d) urinary
66. Meiosis occurs in the
- a) fallopian tube.
 - b) penis
 - c) testes.
 - d) vagina.
67. In mitosis and meiosis, chromosomes align or assemble in the middle of the cell at
- a) anaphase.
 - b) metaphase.
 - c) prophase.
 - d) telophase.
68. In meiosis, nuclear membrane disappears at
- a) anaphase.
 - b) metaphase.
 - c) prophase.
 - d) telophase.

69. During a cell division, nucleolus re-appears in

- a) anaphase.
- b) metaphase.
- c) prophase.
- d) telophase.

70. The first stage in cell division is the

- a) anaphase.
- b) metaphase.
- c) prophase.
- d) telophase.

SECTION B (30 Marks)

1. Two arteries supply oxygen and nutrients to each half of the brain. Name the arteries.(2 mark)
2. Which organelle in the white blood cell is for the removal of pathogens in the body?(1 mark)
3. Which vein in the arm is often chosen as the site for drawing blood for the purpose of blood testing? (1 mark)
4. What is mid-sagittal section of an organ? (3 marks)
5. Name the two subdivisions of the dorsal cavity of the body. (2 mark)
6. Write short notes on **tongue-tie**? (4 mark)
7. Explain why neurons in the brain damaged by stroke cannot be replaced. (3 marks)
8. Name the artery that can be palpated at the posterior knee area. (1 mark)
9. Where in the human body are a) **microvilli** and b) **cilia** common? (2 marks)
10. What is **ventricular septal defect**?(3 marks)
11. What are **varicose veins**? (3 marks)
12. What is **greater omentum** in the digestive system?(3 marks)
13. Give **one** difference between the cardio-vascular systems of an **expectant mother** and her **fetus**.(2 marks)

Total of 100 marks