

JEMAS(PG)-2022

QB No: 2101800001

Subject: M. Sc. in Operation Theatre Science (M. Sc OTS)

Duration: 90 minutes

No of MCQ: 100

Full Marks: 100

Instructions

1. All questions are of objective type having four answer options for each, carry 1 mark each and only one option is correct. In case of incorrect answer or any combination of more than one answer, $\frac{1}{4}$ mark will be deducted.
2. Questions must be answered on OMR sheet by darkening the appropriate bubble marked A, B, C, or D. Question booklet series code (A, B, C, or D) must be properly marked on the OMR.
3. Use only **Black/Blue ball point pen** to mark the answer by complete filling up of the respective bubbles.
4. Write question booklet number and your roll number carefully in the specified locations of the **OMR**. Also fill appropriate bubbles.
5. Write your name (in block letter), name of the examination center and put your full signature in appropriate boxes in the OMR.
6. The OMR is liable to become invalid if there is any mistake in filling the correct bubbles for question booklet number/roll number or if there is any discrepancy in the name/signature of the candidate, name of the examination center. The OMR may also become invalid due to folding or putting stray marks on it or any damage to it. The consequence of such invalidation due to incorrect marking or careless handling by the candidate will be sole responsibility of candidate.
7. Candidates are not allowed to carry any written or printed material, calculator, pen, log-table, wristwatch, any communication device like mobile phones etc. inside the examination hall. Any candidate found with such items will be **reported against** and his/her candidature will be summarily cancelled.
8. Rough work must be done on the question paper itself. Additional blank pages are given in the question paper for rough work.
9. Hand over the OMR to the invigilator before leaving the Examination Hall.

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1. What will be the pulse pressure for a blood pressure reading of 130/80 mm Hg?
(A) 80 mmHg
(B) 50 mmHg
(C) 210 mmHg
(D) 130 mmHg
2. To what pressure an endotracheal tube must be inflated to produce an adequate seal between the cuff and the wall of the trachea?
(A) 20 mm Hg
(B) 16 mm Hg
(C) 22 mm Hg
(D) 18 mm Hg
3. In a thyroidectomy, a loop retractor retracts the:
(A) Thyroid veins
(B) Cervical fascia
(C) Sternocleidomastoid muscle
(D) Platysma muscle
4. Who is considered as the father of modern digital programmable computers?
(A) Herman H Goldstein
(B) Charles Babbage
(C) Marcian E Hoff
(D) Joseph Jacquard
5. Which method should be used to open the airway in case of suspected C spine injury?
(A) Jaw thrust
(B) Back thrust
(C) Abdominal thrust
(D) Head tilt and chin lift
6. The force maintaining primary structure of a protein is called:
(A) Hydrogen bonds.
(B) Electrostatic (ionic) bonds.
(C) Hydrophobic forces.
(D) Peptide bonds.
7. The primary cause of depletion of ozone is the presence of _____ in the atmosphere.
(A) Chlorofluorocarbons
(B) Hydrocarbons
(C) Carbon monoxide
(D) Nitrogen oxide

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8. When is National Earth Day celebrated?
- (A) 21st June
 - (B) 17th May
 - (C) 15th June
 - (D) 22nd April
9. Which of the following is known as laughing gas?
- (A) B_2O
 - (B) CO_2
 - (C) NO_2
 - (D) N_2O
10. What is the colour of nitrous oxide gas cylinder?
- (A) White
 - (B) Black
 - (C) Gray
 - (D) Blue
11. Aldosterone regulates:
- (A) Sodium absorption
 - (B) Urine concentration
 - (C) Serum calcium
 - (D) Blood glucose
12. An intravenous solution of 0.45% sodium chloride is_____.
- (A) Hypotonic
 - (B) Isomeric
 - (C) Hypertonic
 - (D) Isotonic
13. A habitat is home to many organisms and destroying a habitat affects _____.
- (A) Weather
 - (B) Resources
 - (C) Climate
 - (D) Biodiversity
14. Which is an intrinsic risk factor that places the client at risk for pressure ulcers?
- (A) Friction
 - (B) Shearing
 - (C) Impaired tissue perfusion
 - (D) Pressure

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15. The instrument used to retract the skin edges, blood vessels, nerves and abdominal wall is:
- (A) Czerny's retractor
 - (B) Pronged retractor
 - (C) Lange beck's retractor
 - (D) Doyen's retractor
16. The 'Pollutant Standard Index' is related to:
- (A) Air pollution
 - (B) Water pollution
 - (C) Noise pollution
 - (D) Soil pollution
17. What mixture of gases is used in general anaesthesia?
- (A) O₂ and CO₂
 - (B) CO₂, O₂, and N₂O
 - (C) O₂ and N₂O
 - (D) CO₂ and N₂O
18. When the Environment Protection Act came into force in India?
- (A) 1988
 - (B) 1985
 - (C) 1987
 - (D) 1986
19. What is capnometry?
- (A) Measurement of end-tidal NO₂
 - (B) The measurement of end-tidal CO₂
 - (C) Measurement of end-tidal N₂O
 - (D) Measurement of end-tidal O₂
20. Cholecalciferol is synthesized in ____.
- (A) Liver
 - (B) Kidney
 - (C) Intestinal mucosa
 - (D) Skin
21. Which of the following is NOT considered a portal of entry for bacteria?
- (A) Intact skin
 - (B) Eyes
 - (C) Mouth
 - (D) Nose

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22. Lactam-lactim interconversion is an example of:
- (A) Anomerisation
 - (B) Optical isomerism
 - (C) Tautomerism
 - (D) Epimerisation
23. A computer program that converts assembly language into object code is known as
- (A) Compiler
 - (B) Assembler
 - (C) Comparator
 - (D) Translator
24. What type of immunity occurs when a person is given an injection of immune serum?
- (A) Adaptive immunity
 - (B) Active artificial immunity
 - (C) Active natural immunity
 - (D) Passive artificial immunity
25. What is the color-coding of the bags used in hospitals to dispose of human anatomical wastes such as body parts?
- (A) Blue
 - (B) Red
 - (C) Yellow
 - (D) Black
26. Sick Building Syndrome refers to:
- (A) Second hand smoke
 - (B) Indoor air quality
 - (C) Outdoor air pollution
 - (D) Photochemical smog
27. What is the name of the temporary data storage area between a peripheral device and the CPU. which compensates for the difference between their speeds?
- (A) Temporary storage
 - (B) Main storage
 - (C) Buffer
 - (D) Backing storage
28. The type of drain providing drainage of colorectal anastomosis is:
- (A) Silastics tube drain
 - (B) Under water seal drainage
 - (C) Vaccum drain
 - (D) T-tube drain

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29. During data processing, where does the actual execution of instructions takes place?
- (A) Storage Unit
 - (B) Arithmetic logic Unit
 - (C) Register unit
 - (D) Control unit
30. Which of the following cellular organelles serve as the site of protein synthesis?
- (A) Golgi bodies
 - (B) Mitochondria
 - (C) Endoplasmic reticulum
 - (D) Peroxisome
31. "First, do no harm" is based on which ethical principle of health care?
- (A) Non-maleficence
 - (B) Fidelity
 - (C) Accountability
 - (D) Beneficence
32. In hospitals the waste sharps are disposed of in _____ containers.
- (A) Blue
 - (B) Yellow
 - (C) Black
 - (D) Red
33. Which of the following amino acids have an indole ring in their structure?
- (A) Arginine
 - (B) Histidine
 - (C) Tryptophan
 - (D) Proline
34. Which ozone layer provides great benefit to the life on Earth?
- (A) Tropopause
 - (B) Stratosphere
 - (C) Photosphere
 - (D) Troposphere
35. Which of the following is an inhalation anaesthetic agent?
- (A) Fentanyl
 - (B) Cyclopropane
 - (C) Halothane
 - (D) Ethylene

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36. The MS-DOS operating system is a:
- (A) Multi-tasking operating system.
 - (B) Command-driven interface.
 - (C) Graphical user interface system.
 - (D) Single-user operating system.
37. _____ the major fat present in adipose tissues.
- (A) Phospholipids
 - (B) Triacylglycerol
 - (C) Cholesterol
 - (D) Sphingolipids
38. Full form of AEP is:
- (A) Auditory Evoked Potential.
 - (B) Auxiliary Evoked Potential.
 - (C) Ambulatory Evoked Potential.
 - (D) Audiovisual Evoked Potential.
39. Most health-care-associated infections are transmitted to patients:
- (A) From the hands of the health care workers.
 - (B) It's from dirty washrooms.
 - (C) From hospital food.
 - (D) By talking to each other.
40. Which of the following patients is at greatest risk for extravasation?
- (A) A client who is receiving potassium supplementation intravenously.
 - (B) The client who is receiving total parenteral nutrition.
 - (C) The client with cancer who is receiving endamustine.
 - (D) A patient with heart failure who is receiving Ringer's lactate.
41. Which of the following amino acids does NOT have an acidic side chain at neutral pH?
- (A) Tyrosine
 - (B) Threonine
 - (C) Glutamic acid
 - (D) Aspartic acid
42. Which of the following is NOT the property of Oxygen?
- (A) It is colorless.
 - (B) It has some pungent smell.
 - (C) It's highly explosive.
 - (D) It is highly volatile.

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43. What should be rate of compressions per minute while providing chest compressions in CPR?
- (A) 120 per minute
 - (B) 100 per minute
 - (C) 140 per minute
 - (D) 80 per minute
44. One of the methods to measure changes in the levels of consciousness during anaesthesia is known as:
- (A) Tactile Evoked Potential.
 - (B) Visual Evoked Potential.
 - (C) Speech Evoked Potential.
 - (D) Auditory Evoked Potential
45. Which part of a computer system enables human operators to connect directly to the host computer?
- (A) Keyboard
 - (B) Console
 - (C) CPU
 - (D) Printer
46. Ecosystem diversity:
- (A) Includes the things that the environment makes and people take and use.
 - (B) Involves sustaining the energy flow, food web, and recycling of nutrients.
 - (C) Is something the environment does for free that benefits people.
 - (D) Is a predictable series of changes over time in plant and animal communities.
47. Whipple procedure is performed in the case of:
- (A) Obesity
 - (B) Cancer of pancreas
 - (C) Liver disorders
 - (D) Breast cancer
48. With respect to anaesthesia, full form of PCA is:
- (A) Personal comfort Analgesia.
 - (B) Patient comfort Analgesia.
 - (C) Patient controlled Analgesia.
 - (D) Personal control Analgesia.
49. Smallest item of data is called _____.
- (A) File
 - (B) Database
 - (C) Bit
 - (D) Character

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50. Mayo's operation is done for:
- (A) Femoral hernia
 - (B) Umbilical hernia
 - (C) Epigastric hernia
 - (D) Inguinal hernia
51. What is nephrectomy?
- (A) Surgical removal of kidney
 - (B) Surgical removal of necrotic tissues
 - (C) The surgical repair of a nerve
 - (D) Surgical removal of a nerve
52. Which basic activity of daily living assistive device can be useful for the client who is affected with poor fine motor coordination?
- (A) An aphasia aid
 - (B) A word board
 - (C) A button hook
 - (D) Honey thickened liquids
53. _____ is the site of giving spinal anaesthesia.
- (A) L1 – L2
 - (B) L2 – L3
 - (C) L5 – L6
 - (D) L3 – L4
54. The perianal varicose veins:
- (A) Polyps
 - (B) Hemorrhoids
 - (C) Anorectal tumors
 - (D) Fistulas
55. Microprocessors as switching devices are for which generation computers?
- (A) First generation
 - (B) Second generation
 - (C) Third generation
 - (D) Fourth generation
56. Which of the following is NOT an input device?
- (A) Mouse
 - (B) Keyboard
 - (C) Speaker
 - (D) Scanner

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57. The quadriceps exercises are the example of:
- (A) Isotonic exercises.
 - (B) Isometric exercises
 - (C) Isokinetic exercises
 - (D) ROM exercises.
58. What is the function of a nebulizer?
- (A) To facilitate the accurate supply of the gas
 - (B) Maintain the levels of individual gases
 - (C) To supply moisture in the form of droplets
 - (D) To maintain the body temperature
59. Anal and perianal procedures should be performed in which of the following positions?
- (A) Lateral
 - (B) Lithotomy
 - (C) Dorsal recumbent
 - (D) Trendelenburg
60. Which of the following procedures removes the entire breast and axillary contents but preserves the pectoral muscles?
- (A) Lumpectomy
 - (B) Radical mastectomy
 - (C) Modified radical mastectomy
 - (D) Segmental mastectomy
61. Which of the following risk factors is the most likely to be correctable?
- (A) Genetic predisposition
 - (B) An external locus of control
 - (C) Lifestyle choices
 - (D) High risk behaviors
62. An instrument placed against a patient's chest to hear both lung and heart sounds is called:
- (A) Stethoscope
 - (B) Telescope
 - (C) Otoscope
 - (D) Sphygmomanometer
63. To increase stability during the transfer of a patient, it is important to increase the base of support by:
- (A) Bending the knees
 - (B) Tensing the abdominal muscles
 - (C) Leaning slightly backward
 - (D) Spacing the feet apart.

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64. Select the arterial blood gas that is NOT within normal parameters and it is also a significant change for the client.
- (A) Arterial blood pH : 7.39
 - (B) PaO₂ : 65 mm Hg
 - (C) PaCO₂ : 40 mm Hg
 - (D) SaO₂ : 96%
65. A small artery forceps used to hold small bleeders is called:
- (A) Babcock's tissue forceps
 - (B) Non-toothed dissecting forceps
 - (C) Mosquito forceps
 - (D) Allis tissue forceps
66. All of the logic and mathematical calculations done by a computer happen in/on the:
- (A) Motherboard.
 - (B) Central processing unit.
 - (C) Central control unit.
 - (D) System board.
67. In hospital, the infectious non-sharp waste i.e. soiled bandage, dressings, soiled cotton are disposed of in _____ containers.
- (A) Red
 - (B) Black
 - (C) Blue
 - (D) Yellow
68. What is the correct order of the intestinal layer, from inside to outside?
- (A) Serosa, musculature, mucosa
 - (B) Mucosa, submucosa, serosa
 - (C) Serosa, mucosa, musculature
 - (D) Mucosa, serosa, musculature
69. During denaturation, proteins will not lose their structure with regard to _____.
- (A) Quaternary structure
 - (B) Tertiary structure
 - (C) Primary' structure
 - (D) Secondary' structure
70. Preoperative or preprocedural prevention of infection is called:
- (A) Protective precautions
 - (B) Prophylaxis
 - (C) Primordial prevention
 - (D) Primary prevention

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71. Nerve block is a type of:
- (A) General anaesthesia.
 - (B) Topical anaesthesia.
 - (C) Regional anaesthesia.
 - (D) Local anaesthesia.
72. The instrument most commonly used to hold soft tissues, organs and bowel is:
- (A) Allis
 - (B) Babcock
 - (C) Kocher
 - (D) Kelly
73. In MICR, C stands for _____.
- (A) Character
 - (B) Code
 - (C) Colour
 - (D) Computer
74. Which of the following refers to a network interconnecting computers and other peripheral devices within a limited geographical area?
- (A) DSL
 - (B) USB
 - (C) LAN
 - (D) RAM
75. Which of the following is NOT true regarding pulse oximeter?
- (A) It is used to measure O₂ saturation in blood.
 - (B) It is used to measure the saturation of all the gases in the blood.
 - (C) Sensor probe can be clipped on the finger, toe or earlobe.
 - (D) It is a very sensitive monitor.
76. Which of the following is NOT the narcotic drug?
- (A) Pethidine
 - (B) Demerol
 - (C) Propofol
 - (D) Morphine sulphate
77. Which of the following lipids is NOT present in vegetable oil?
- (A) Oleic acid
 - (B) Linoleic acid
 - (C) Cholesterol
 - (D) Stearic acid

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78. While instructing the patient regarding 24 hour urine collection, which of the following should NOT be done?
- (A) Refrigeration of the specimen during collection may be required.
 - (B) The first voided urine should be discarded.
 - (C) Add some preservatives to prevent decomposition.
 - (D) The last voided urine should be discarded.
79. Which of the following instruments is used to dilate the cervix during various procedures?
- (A) Hagar's dilator
 - (B) Sims vaginal speculum
 - (C) Vulsellum forceps
 - (D) Fergusson speculum
80. In the Bhopal Gas Tragedy in the year 1984, which gas was leaked?
- (A) Methyl isocyanate
 - (B) Oleum
 - (C) Chlorine
 - (D) Ammonia
81. In hospitals, the discarded medicines and cytotoxic drugs are disposed of in
- (A) Red
 - (B) yellow
 - (C) black
 - (D) blue
82. Scurvy happens due to deficiency of _____.
- (A) Vitamin C
 - (B) Iodine
 - (C) Zinc
 - (D) Vitamin D
83. During starvation, which of the following substances does NOT increase in blood or tissue?
- (A) Glucagon
 - (B) Glycogen
 - (C) Epinephrine
 - (D) Ketone bodies
84. The sugar(s) formed as a result of sucrose digestion is/are:
- (A) Two moles of glucose.
 - (B) Fructose and glucose.
 - (C) Glucose and galactose.
 - (D) Maltose and glucose.

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85. The condition in which protrusion of a part of stomach through the thoracic cavity is observed is called:
- (A) Achalasia
 - (B) Esophageal varices
 - (C) Hiatal hernia
 - (D) Oesophagitis
86. McBurney's incision is used for:
- (A) Herniorrhaphy
 - (B) Appendectomy
 - (C) Nephrectomy
 - (D) Cholecystectomy
87. Which complication of immobility would be of most concern in case of a bedridden patient?
- (A) Hypertension
 - (B) Incontinence
 - (C) Contractures
 - (D) Dehydration
88. Which is a sign of thrombocytopenia?
- (A) The appearance of thrombophlebitis
 - (B) Elevated platelets
 - (C) Aplastic anemia
 - (D) The appearance of petechiae
89. What is the full form of DVD?
- (A) Data Video Disk
 - (B) Dynamic Video Disk
 - (C) Direct Video Disk
 - (D) Digital Video Disk
90. How many stages of anaesthesia are there?
- (A) Two
 - (B) Four
 - (C) Three
 - (D) Five
91. The removal of entire tumor/mass is known as:
- (A) Excisional biopsy
 - (B) Incisional biopsy
 - (C) Staging biopsy
 - (D) Needle biopsy

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92. The direct visualisation of the common bile duct is accomplished with the help of a:
(A) Trocar
(B) Cholangiogram
(C) Cholangiocath
(D) Choledochoscope
93. What mixture of gases is used in cry of freezing anesthesia?
(A) O₂ and CO₂
(B) O₂ and N₂O
(C) NO₂ and CO₂
(D) CO₂ and N₂O
94. When was the Safe Drinking Water Act enacted?
(A) 1974
(B) 1971
(C) 1972
(D) 1973
95. The eyeless suturing needles are called:
(A) Round body needles
(B) Atraumatic needles
(C) Curved cutting needles
(D) Taper cut needles
96. At what angle an intramuscular injection should be given?
(A) 45°
(B) 30°
(C) 90°
(D) 15°
97. Reduction of oxygen in blood is called.
(A) Anoxemia
(B) Apnoea
(C) Arrhythmia
(D) Anoxia
98. Which of the following is a method of collecting materials that can be broken down and reprocessed to manufacture new items?
(A) Deep-well injection
(B) Composting
(C) Industrial ecology
(D) Recycling

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99. The most important of the greenhouse gases is:
- (A) Carbon monoxide
 - (B) Nitrous oxide
 - (C) Methane
 - (D) Carbon dioxide
100. Which of the following enzymes contains copper?
- (A) Cytochrome P450
 - (B) Coenzyme Q
 - (C) Cytochrome oxidase
 - (D) Cytochrome B5

