

PROVISIONAL ANSWER KEY

Question 125/2023/OL

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Category 741/2022

Code:

Exam: CSR Technician Grade II/ Sterilisation Technician Grade II

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Department Medical Education

Question1:-Which of the following is an oxidizing agent?

A:-Glutaraldehyde

B:-Alcohol

C:-Peracetic acid

D:-Sodium hypochlorite

Correct Answer:- Option-C

Question2:-Which of the following dental instruments should either be 'Single-use disposable' or capable of being steam sterilized?

A:-Dental tweezers

B:-Mouth mirror

C:-Prosthetic gauges

D:-Dental forceps

Correct Answer:- Option-D

Question3:-The recommended temperature and time periods at a pressure of 15psi for sterilisation in a gravity displacement steam steriliser is

A:-160°C for 60 minutes

B:-126°C for 3 minutes

C:-121°C for 15 minutes

D:-180°C for 5 minutes

Correct Answer:- Option-C

Question4:-Holding temperature and time for sterilisation in hot air oven is

A:-160°C for 15 minutes

B:-160°C for 30 minutes

C:-160°C for 60 minutes

D:-160°C for 120 minutes

Correct Answer:- Option-D

Question5:-All are chemical sterilants except

A:-Hydrogen peroxide 7.5%

B:-Glutaraldehyde >2%

C:-Sodium hypochlorite 0.5%

D:-Peracetic acid 0.2%

Correct Answer:- Option-C

Question6:-Anesthesia equipment come under which category of Spaulding's classification

A:-Critical device

B:-Semicritical device

C:-Non critical device

D:-None of the above

Correct Answer:- Option-B

Question7:-Which of the following shows highest resistance to sterilising agents

A:-Bacterial spore

B:-Non enveloped viruses

C:-Mycobacteria

D:-Prions

Correct Answer:- Option-D

Question8:-What is the percentage of ethyl alcohol used for hand hygiene

A:-60-90%

B:-100%

C:-10-20%

D:-0.5-1%

Correct Answer:- Option-A

Question9:-Which of the following articles cannot be steam sterilised?

A:-Surgical instruments

B:-Linen

C:-Endoscopes

D:-None of the above

Correct Answer:- Option-C

Question10:-Recommended relative humidity in CSSD is

A:-40-50%

B:-50-60%

C:-60-70%

D:-70-80%

Correct Answer:- Option-A

Question11:-Linen can be used a packaging material in

A:-Ethylene oxide steriliser

B:-Plasma steriliser

C:-Steam steriliser

D:-Hot air oven

Correct Answer:- Option-A

Question12:-The organism used in Rideal Walker test is

A:-Staphylococcus aureus

B:-Pseudomonas aeruginosa

C:-Salmonella Typhi

D:-Proteus Vulgaris

Correct Answer:- Option-C

Question13:-Workflow of CSSD should be

A:-Accessory area → Decontamination area → Inspection, Assembly and packing area → Sterilisation area → Storage area

B:-Decontamination area → Inspection, Assembly and packing area → Accessory area → Sterilisation area → Storage area

C:-Decontamination area → Sterilisation area → Inspection, Assembly and packing area → Accessory area → Storage area

D:-Accessory area → Decontamination area → Sterilisation area → Inspection, Assembly and packing area → Storage area

Correct Answer:- Option-A

Question14:-Which of the following areas should be under negative pressure?

A:-Decontamination area

B:-Preparation and packing area

C:-Sterile storage area

D:-Delivery counter

Correct Answer:- Option-A

Question15:-Spraying the used instrument with an enzymatic solution is called

A:-Manual cleaning

B:-Disinfection

C:-Pre-cleaning

D:-Leak test

Correct Answer:- Option-C

Question16:-Which of the following is not an advantage of Automated Endoscope Reprocessors?

A:-They replace manual cleaning

B:-They automate several reprocessing steps

C:-Reduce the chance of a reprocessing step being skipped

D:-Reduce personnel exposure to chemical sterilants

Correct Answer:- Option-A

Question17:-Fast sterilisation of unwrapped surgical instruments in an emergency situation is called

A:-Rapid sterilisation

B:-Emergency sterilisation

C:-Flash sterilisation

D:-Open sterilisation

Correct Answer:- Option-C

Question18:-Which statement is not true regarding plasma sterilisation?

A:-items should be totally dried before loading

B:-linen or cellulose cannot be processed

C:-occupational exposure has been linked to hematologic changes

D:-cannot be used for bulk items

Correct Answer:- Option-C

Question19:-Which of the following procedures help to preventing formation of biofilm inside endoscopes?

A:-applying air pressure to the inside of the endoscope

B:-immersion in glutaraldehyde

C:-flushing with detergent

D:-drying with forced air

Correct Answer:- Option-C

Question20:-The number of contaminated organisms found in a given amount of material before undergoing a sterilizing procedure is known as

A:-Microbial load

B:-Contamination index

C:-Bioburden

D:-Presterilisation index

Correct Answer:- Option-C

Question21:-Reuse life of flutaraldehyde after activation is

A:-15-30 days

B:-30-45 days

C:-45-60 days

D:-60-75 days

Correct Answer:- Option-A

Question22:-Degassing to remove toxic residues should be done after sterilisation

with

A:-Gas plasma

B:-Ethylene oxide

C:-Hydrogen peroxide

D:-Ozone

Correct Answer:- Option-B

Question23:-Concentration of peracetic acid used for sterilisation is

A:-0.1-0.2%

B:-0.2-0.5%

C:-0.5-1.0%

D:-1.0-2.0%

Correct Answer:- Option-A

Question24:-Precogning is ideally done in

A:-Decontamination area

B:-Preparation area

C:-Inspection area

D:-Point of use area

Correct Answer:- Option-D

Question25:-Which of the following materials should be used to wrap materials in a gas plasma steriliser?

A:-Polypropylene

B:-Cellulose

C:-Linen

D:-Paper

Correct Answer:- Option-A

Question26:-Type V chemical indicators measure all the following variables except

A:-Time

B:-Temperature

C:-Humidity

D:-Steam quality

Correct Answer:- Option-C

Question27:-Biological indicators which work by detection of enzymes and metabolites produced by indicator organisms are

A:-Next generation biological indicators

B:-Rapid read-out biological indicators

C:-Spore strip biological indicators

D:-Enzymatic biological indicators

Correct Answer:- Option-B

Question28:-Which of the following is used as sterilisation control for Ethylene oxide

A:-Bacillus atrophaeus

B:-Bowie Dick test

C:-Temperature displays

D:-All of the above

Correct Answer:- Option-D

Question29:-Which of the following methods is not used for testing of disinfectants?

A:-McCrary's test

B:-Rideal-Walker test

C:-Chick-Martin test

D:-Kelsey-Syke's test

Correct Answer:- Option-A

Question30:-Geobacillus stearothermophilus is used as the biological indicator in all the following methods except

A:-Hot air oven

B:-Steam steriliser

C:-Gas plasma

D:-Liquid acetic acid steriliser

Correct Answer:- Option-A

Question31:-A preassembled test pack containing a biological indicator and a chemical indicator is called

A:-Indicator pack

B:-Preassembled control pack

C:-Sterilisation control device

D:-Process challenge device

Correct Answer:- Option-D

Question32:-Exposure indicators belong to which type of chemical indicator?

A:-Type I

B:-Type II

C:-Type III

D:-Type IV

Correct Answer:- Option-A

Question33:-Rapid read-out biological indicators can detect spore viability in

A:-4 hrs

B:-8 hrs

C:-16 hrs

D:-24 hrs

Correct Answer:- Option-A

Question34:-Documentation in CSSD is useful for all except

A:-Quality assurance

B:-Instrument recall

C:-Sterility control

D:-Patient tracing

Correct Answer:- Option-C

Question35:-The amount of disinfectant solution taken for doing in use test of Kelsey and Maurer is

A:-1 mL

B:-2 mL

C:-5 mL

D:-10 mL

Correct Answer:- Option-A

Question36:-Which statement is more appropriate regarding packaging systems used in CSSD

A:-Packaging must be appropriate for the items to be sterilized and the method of sterilization

B:-All surfaces of devices should be equally exposed for the sterilization

C:-Packaging should be resistant to punctures, tears and other damage that may break the sterile barrier

D:-All of the above

Correct Answer:- Option-D

Question37:-All are advantages of reusable woven fabrics for packing except

A:-Resistant to tearing

B:-Package will be heavy

C:-Reuse possible even if there are holes in the fabric

D:-Cost effective

Correct Answer:- Option-C

Question38:-All are true regarding storage of sterilized items except

A:-Storage of items should be based on "First-in-first-out rule"

B:-There should be negative air flow from the sterile area to other area

C:-Handling of sterile items should be minimum

D:-Storage area should be restricted area preferably away from windows or

traffic

Correct Answer:- Option-B

Question39:-Packages should be labelled with

A:-Content

B:-Lot number and expiry date

C:-Signature of operator

D:-All of the above

Correct Answer:- Option-D

Question40:-The following parameters should be looked upon while planning CSSD laundry

A:-Location and size of institution

B:-Number of inpatient beds

C:-Average number of surgical procedures and equipments needed

D:-All of the above

Correct Answer:- Option-D

Question41:-The following are activities at the generation point in case of non critical areas before linen and equipments are brought to CSSD and mechanized laundry except

A:-Change of linen daily

B:-Segregation of linen

C:-Distribution

D:-Disinfection

Correct Answer:- Option-C

Question42:-Disinfection of soiled linen should be done by

A:-Phenol

B:-0.5% sodium hypochlorite solution

C:-2% Glutaraldehyde

D:-All of the above

Correct Answer:- Option-B

Question43:-Which of the following statement is false regarding activities at CSSD

A:-The articles are sorted into for different packs for different methods of cleaning

B:-CSSD technicians should inspect the status of unsterile packs received and also see whether any torn, punctured or damaged packs

C:-There should be a common window for receiving and dispatching items

D:-Proper entry of details of items should be done in appropriate registers ie, date, time, type of items, ward, source, procedure done, name and signature of person receiving

Correct Answer:- Option-C

Question44:-True statement regarding Rigid reusable instrument container in CSSD

A:-Used for the moist heat sterilization of surgical instruments

B:-They have perforations in the top lid, converted internally by steam permeable HEPA filters

C:-Made up of anodized Aluminium, stainless steel, high temperature plastics or combinations of these

D:-All of the above

Correct Answer:- Option-D

Question45:-All are functions of storage area except

A:-Storage area should be digitalized and automated if possible

B:-Storage of sterilized items should be in the space provided

C:-Distribution of inventory of sterile items should be followed according of FIFO rule

D:-If sterile packs are found torn, or already opened or wet, the whole sterilization process need not be repeated

Correct Answer:- Option-D

Question46:-The statement more appropriate regarding issue and distribution of items after sterilization at CSSD

A:-Issue of sterilized packages, dressing, linen, Instruments and disposables should be sent to various departments

B:-Transportation of instruments should be done as per protocols in stainless steel trolleys

C:-If the sterile packs issued to departments remain unutilised for more than 72 hrs, the same has to be returned to CSSD for re-sterilisation

D:-All of the above

Correct Answer:- Option-D

Question47:-All are true regarding chemical indicators except,

A:-Type I indicator is process control indicator or external pack control

B:-Type III indicator is Bowie Dick, only used for pre vacuum steriliser

C:-Type IV indicator is internal pack control indicator

D:-Type VI indicator is emulating indicator, cycle specific

Correct Answer:- Option-B

Question48:-All are advantages of steam sterilizer except

A:-Non toxic and effective

B:-Penetrate packing

C:-Suitable for sterilization of oils and powders

D:-Easy to control cycles and monitor

Correct Answer:- Option-C

Question49:-All are advantages of Ethylene oxide sterilizer except

A:-Useful for heat sensitive instruments

B:-Non corrosive and excellent material compatability

C:-Easily diffusible so that it can penetrate the area where steam cannot reach

D:-Long duration of cycles due to aeration phase

Correct Answer:- Option-D

Question50:-Select the most appropriate statement regarding the disadvantages of Gas plasma sterilizer

A:-Expensive

B:-It cannot sterilize materials that absorb water like linen, gauze, paper and wood

C:-Low penetration power

D:-All of the above

Correct Answer:- Option-D

Question51:-All the statement are true regarding handling Dirty line except

A:-Care must be taken to remove any extraneous items from dirty linen before it is placed in laundry

B:-Separate trolleys should be maintained for the transport of dirty and clean linen

C:-Personal protective equipments should be used while handling dirty linens

D:-All of the above

Correct Answer:- Option-D

Question52:-All the statement are true regarding handling Dirty equipment except

A:-All dirty equipment shall be handled with care, to minimize transmission of micro-organisms

B:-Proper PPE shall be worn when there is potential for contamination through the instruments

C:-Trays/Trolleys used for the transportation of dirty equipment can be used to transport of sterilized instruments

D:-All dirty instruments shall be packed and labelled carefully after use

Correct Answer:- Option-C

Question53:-All the statement are true Ultrasonic cleaner except

A:-A preferred cleaning method of hard-to-reach parts of surgical instruments such as hinges, and joints serrations, and crevices

B:-Precogning before subjecting to instruments is not needed

C:-It works on the principle of creating a vacuum in the solution that draws debris from the instruments into the surrounding media

D:-Ultrasonic process need to be validated yearly for ensuring safety

Correct Answer:- Option-B

Question54:-The activities related to preventive maintenance of equipments are

A:-Calibration

B:-Part replacement

C:-Lubrication

D:-All of the above

Correct Answer:- Option-D

Question55:-The following persons are responsible when a medical equipment is installed

A:-Specifier, purchaser

B:-Receiver, local technical staff

C:-Supplier, carrier, store person, user

D:-All of the above

Correct Answer:- Option-D

Question56:-All the following are possible causes of inadequate heating in an Autoclave except

A:-Blocked safety valve

B:-Absence of power in main socket

C:-Electrical cable fault

D:-Damaged heating element

Correct Answer:- Option-A

Question57:-The following activities should be supervised by CSSD in charge

A:-Technical protocol and flow process should be monitored

B:-Restriction of unnecessary entry of staff into CSSD

C:-Documentation of all activities in receiving area and regular cleaning of all equipments used in laundry

D:-All of the above

Correct Answer:- Option-D

Question58:-All are chemical sterilizers used in CSSD except

A:-Steam sterilizer

B:-Plasma sterilisation

C:-Ozone sterilizer

D:-Low Temperature steam Formaldeyde

Correct Answer:- Option-A

Question59:-Components of effective maintenance strategy of an equipment includes

A:-User manual, inventory and installation of equipment

B:-Equipment details, maintenance

C:-Condemnation of old and obsolete equipments

D:-All of the above

Correct Answer:- Option-D

Question60:-Mention the appropriate option regarding computerized maintenance management system (CMMS)

A:-A software that can be very useful in managing the medical equipment maintenance programme

B:-It can keep inventory of each device in health care facility

C:-It can keep record of past events of all inspection and preventive maintenance procedures undergone

D:-All of the above

Correct Answer:- Option-D

Question61:-A connection between two excitable cells in the contact surfaces between two neurons is called

A:-Dendrites

B:-Synapse

C:-Sodium pump

D:-Neurotransmitter

Correct Answer:- Option-B

Question62:-The electrical pulse generator used to restart the heart rhythm is

A:-Ventilator

B:-Heart-lung machine

C:-Respirator

D:-Pacemaker

Correct Answer:- Option-D

Question63:-MRI technique makes use of which region in electromagnetic spectra is

A:-Radio frequency region

B:-Infrared

C:-Ultraviolet

D:-None of the above

Correct Answer:- Option-A

Question64:-The membrane which encloses the skeletal bones is

A:-Semipermeable membrane

B:-Pericardium

C:-Periostium

D:-Pelvis

Correct Answer:- Option-C

Question65:-In blood, pH below 7.35 indicates

A:-Respiratory acidosis

B:-Anaemia

C:-Arrythmia

D:-Respiratory alkalosis

Correct Answer:- Option-A

Question66:-In which mode the ultrasound scanners reflected echoes are depicted as dots on screen

A:-A-mode

B:-B-mode

C:-T-M mode

D:-Doppler mode

Correct Answer:- Option-B

Question67:-The positive potential of the cell membrane during excitation is about

A:-5 mV

B:-10 mV

C:-0.01 mV

D:-20 mV

Correct Answer:- Option-D

Question68:-The resolving power of an electron microscope is

A:-2000 AV

B:-200 AV

C:-20 AV

D:-2 AV

Correct Answer:- Option-D

Question69:-The procedure which washes the lungs and collects the sample of lung cells fluids, microbes etc is called

A:-Electrotomy

B:-Oximetry

C:-Lavage

D:-Insufflation

Correct Answer:- Option-C

Question70:-Electrocardiogram refers to

A:-ECG wave pattern

B:-An instrument to record ECG

C:-Study of ECG

D:-None of these

Correct Answer:- Option-A

Question71:-In flame photometer the output of sodium and potassium channel are calibrated in terms of

A:-Difference with calcium

B:-Difference with potassium

C:-Difference with known lithium

D:-Difference with sodium

Correct Answer:- Option-C

Question72:-The loss of energy of incident radiation appears in the form of white x-rays and are known as

A:-Thermal radiation

B:-Bremsstrahlung radiation

C:-Ionizing radiation

D:-Electromagnetic radiation

Correct Answer:- Option-B

Question73:-When a normal person is awake in a quiet resting state, which region occurs in alpha waves

A:-Temporal

B:-Frontal

C:-Occipital

D:-Parietal

Correct Answer:- Option-C

Question74:-The suitable frequency range proposed in the ultrasonic diathermy is

A:-800 Khz - 1 MHz

B:-1600 KHz - 2 MHz

C:-10 KHz - 1 MHz

D:-20 Hz - 20 KHz

Correct Answer:- Option-A

Question75:-A high voltage source in x-rays machine is

A:-Power transformer

B:-Isolation transformer

C:-Step-up transformer

D:-Autotransformer

Correct Answer:- Option-D

Question76:-The indirect method of BP measurement is

A:-Percutaneous insertion

B:-Sphygmomanometer

C:-Catheterization

D:-Implantation

Correct Answer:- Option-B

Question77:-Which liquid is suitable for Nebulizer

A:-Saline solution

B:-Water

C:-Albuterol sulphate

D:-Methoxy fluvane

Correct Answer:- Option-C

Question78:-The element which is used to improve the sharpness of image in x-ray machines is

A:-Bucky grid

B:-Aluminium filter

C:-Image intensifier

D:-Collimator

Correct Answer:- Option-A

Question79:-The instrument which is used to measure pulsatile blood flow

A:-Turbine flow meter

B:-Ultrasonic blood flow meter

C:-Electromagnetic blood flow meter

D:-Laser blood flow meter

Correct Answer:- Option-C

Question80:-In phototherapy treatment, the wavelength of the uv light must be

A:-200-350 nm

B:-1500-3000 nm

C:-500-1000 nm

D:-420-500 nm

Correct Answer:- Option-D

Question81:-Which is the first NABH accredited Hospital in Kerala?

A:-KIMS

B:-MIMS

C:-SIMS

D:-VIMS

Correct Answer:- Option-B

Question82:-Who is the father of Biomedical engineering?

A:-Adam Smith

B:-P.B Shelly

C:-Charles Dickness

D:-Otto Schimtt

Correct Answer:- Option-D

Question83:-When PCPNDT act passed in India?

A:-1947

B:-1994

C:-1949

D:-1950

Correct Answer:- Option-B

Question84:-Which authority issued Drug license in India?

A:-CDSCO

B:-SIDCO

C:-KSMC

D:-KGPA

Correct Answer:- Option-A

Question85:-AERB was constituted in the year?

A:-1938

B:-1893

C:-1950

D:-1983

Correct Answer:- Option-D

Question86:-In a fullwave bridge rectifier with out filter, the riplle factor is

A:-1.482

B:-1.214

C:-0.482

D:-2.214

Correct Answer:- Option-C

Question87:-Among the following statements which are wrong about Bipolar junction Transistors?

- (i) Bipolar Junction Transistor is a current-driven device
- (ii) Bipolar Junction Transistor is a voltage-driven device
- (iii) Bipolar Junction Transistor has low input impedance
- (iv) Bipolar Junction Transistor has better thermal stability

A:-Only (i) and (iv)

B:-Only (ii) and (iv)

C:-Only (ii) and (iii)

D:-Only (i) and (iii)

Correct Answer:- Option-B

Question88:-_____ is a type of diode whose internal capacitance varies with respect to the reverse voltage

A:-Avalanche Diode

B:-Tunnel diode

C:-Zener Diode

D:-Varactor Diode

Correct Answer:- Option-D

Question89:-The open loop gain of a 741 IC is typically

A:- 2×10^5

B:- 2×10^6

C:- 5×10^2

D:- 6×10^2

Correct Answer:- Option-A

Question90:-The main component responsible for the lowering of gain in an RC coupled amplifier in low frequency region is

A:-Transistor

B:-Coupling capacitors

C:-Resistor R_e

D:-Biasing system

Correct Answer:- Option-B

Question91:-The width of depletion layer of PN junction

A:-is independent of applied voltage

B:-reduces with light doping

C:-Increases with heavy doping

D:-Is increased when reverse biased

Correct Answer:- Option-D

Question92:-IC555 operates on supply voltage of

A:-+15V to 15 V

B:-5V to -18V

C:-+5V to +18V

D:-+5V to -18V

Correct Answer:- Option-C

Question93:-In an amplifier the coupling capacitors are used for

- A:-Preventing DC mixing with input or output
- B:-Matching the impedance
- C:-Preventing AC mixing with input or output
- D:-Controlling the output

Correct Answer:- Option-A

Question94:-Voltmeter should be of very high resistance so that

- A:-Its accuracy is high
- B:-It may draw minimum current
- C:-Its sensitivity is high
- D:-It may draw minimum current

Correct Answer:- Option-D

Question95:-PMMC type instruments normally use

- A:-air friction damping
- B:-fluid friction damping
- C:-eddy current damping
- D:-none of the above

Correct Answer:- Option-C

Question96:-The internal resistance of primary cell varies

- A:-Inversely with the surface area of electrode
- B:-Directly with the surface area of electrode
- C:-Inversely with distance between the electrode
- D:-None of the above

Correct Answer:- Option-A

Question97:-The resistance of wire varies inversely as

- A:-Length
- B:-Resistivity
- C:-Temperature
- D:-Area of cross section

Correct Answer:- Option-D

Question98:-Among the following statements which are true about an open coil

- (i) Infinite resistance
- (ii) Zero resistance
- (iii) Zero inductance
- (iv) Infinite inductance

A:-(i) and (iv)

B:-(ii) and (iv)

C:-(i) and (iii)

D:-(ii) and (iii)

Correct Answer:- Option-C

Question99:-Two capacitors each having capacitance C and breakdown voltage V are joined in series. The capacitance and breakdown voltage of the combination will be

A:- $C/2$ and $2V$

B:- $C/2$ and $V/2$

C:- $2C$ and $2V$

D:- $2C$ and $V/2$

Correct Answer:- Option-A

Question100:-Among the following statements which are wrong about transformer

(i) it changes the level of the voltage

(ii) it changes the level of impedance

(iii) it changes the level of current

(iv) it changes the level of frequency

A:-Only (i) and (ii)

B:-Only (ii) and (iv)

C:-Only (ii) and (iii)

D:-Only (i) and (iv)

Correct Answer:- Option-B