

# FINAL ANSWER KEY

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Question1:-The Social reformer Mannath Padmanabhan delivered the 'Muthukulam Speech' in the year of

- A:-1946
- B:-1947
- C:-1948
- D:-1949

Correct Answer:- Option-B

Question2:-Who was considered as the first Martyr of Kerala Renaissance ?

- A:-Arattupuzha Veleyudha Paniker
- B:-Subhananda Gurudevan
- C:-Kuruban Daivathan
- D:-Vagbadanandan

Correct Answer:- Option-A

Question3:-On the Background of Malabar Rebellion 1921 Kumaranasan wrote the poem

- A:-Veenapoovu
- B:-Prarodhanam
- C:-Pushpavadi
- D:-Duravastha

Correct Answer:- Option-D

Question4:-The 'Silent Ambassador' of a Country is

- A:-Currency
- B:-Press
- C:-Postal Stamp
- D:-People

Correct Answer:- Option-C

Question5:-Name the Indian State where GST is firstly implemented

- A:-Assam
- B:-Kerala
- C:-Tamil Nadu
- D:-Maharashtra

Correct Answer:- Option-A

Question6:-Town Farooq was built by

- A:-Hidar Ali
- B:-Zamorine of Calicut
- C:-Kunhali Marakkar
- D:-Tippu Sulthan

Correct Answer:- Option-D

Question7:-The Island is situated in the South of Lakshadweep

- A:-Kavarathi
- B:-Amini
- C:-Minikoy
- D:-Anthroth

Correct Answer:- Option-C

Question8:-'Kochi as the Queen of Arabian sea' is firstly called by

- A:-Raja Kesavadas
- B:-Divan R. K. Shanmukan Shetti
- C:-Veluthambi Dalava
- D:-Col. Mantro

Correct Answer:- Option-B

Question9:-The name of the cyclone 'Ochi' is given by

- A:-Oman
- B:-Pakistan
- C:-Sri Lanka
- D:-Bangladesh

Correct Answer:- Option-D

Question10:-The Back Bone of Himalaya is

- A:-Himachal
- B:-Sivalic
- C:-Himadri
- D:-Everest

Correct Answer:- Option-C

Question11:-Which colour is commonly used to identify the General Category of Ration Card in Kerala ?

- A:-White
- B:-Pink
- C:-Blue
- D:-Yellow

Correct Answer:- Option-A

Question12:-Name the social reformer of Kerala prohibited the custom 'Ettu - Mattu'

- A:-Chattampi Swamikal
- B:-Vagbadanandan
- C:-Sree Narayana Guru
- D:-Ayyankali

Correct Answer:- Option-B

Question13:-The 'Kerala Napoleon' is

- A:-Pazhasi Raja
- B:-K.P. Karuppan
- C:-Poykayil Yohannan
- D:-Barrister G. P. Pillai

Correct Answer:- Option-C

Question14:-Who is the Chairperson of the National Commission for Women ?

- A:-Rekha Sharma
- B:-Jayanthi Patnaik
- C:-Lalitha Kumaramangalam
- D:-Mamtha Sharma

Correct Answer:- Option-A

Question15:-The first fully blood donated Panchayath in Kerala is

- A:-Plicode
- B:-Vattavada
- C:-Puthige
- D:-Madikai

Correct Answer:- Option-D

Question16:-The Revolt of 1857 led at Kanpur by

- A:-Jansi Rani Laxmi Bai
- B:-Nanasahib
- C:-Tantia Topy
- D:-Kunvar Sing

Correct Answer:- Option-B

Question17:-The Vice President of USA is

- A:-Joe Biden
- B:-Dick Cheney
- C:-Mike Pence
- D:-Hillary Clinton

Correct Answer:- Option-C

Question18:-In the Second Nationalization of commercial banks \_\_\_\_\_ banks were nationalized.

- A:-4
- B:-6
- C:-5
- D:-7

Correct Answer:- Option-B

Question19:-A land mass bounded by sea on three sides referred as

- A:-Peninsula
- B:-Island
- C:-Coast
- D:-None of these

Correct Answer:- Option-A

Question20:-Mahatma Gandhi Marine National Park situated in

- A:-Gujarath
- B:-Maharashtra
- C:-Lakshadweep
- D:-Andaman Nicobar Island

Correct Answer:- Option-D

Question21:-Which of the following does not reduce the inflammatory effects of cardiopulmonary bypass ?

- A:-Red cell transfusion
- B:-Biocompatible circuits
- C:-Leucocyte filters
- D:-Centrifugal Pumps

Correct Answer:- Option-A

Question22:-The following are cardiac chambers except

- A:-Right Atrium
- B:-Right Ventricle
- C:-Left Ventricle
- D:-Left superior venacava

Correct Answer:- Option-D

Question23:-The following are advantages of miniaturised circuits except

- A:-Decreased transfusions
- B:-Less air embolism
- C:-Lower troponin release
- D:-Less blood activation

Correct Answer:- Option-B

Question24:-Active venous drainage may be done with all except

- A:-Centrifugal pump
- B:-Vacuum assist
- C:-Roller pump
- D:-Both A and B

Correct Answer:- Option-C

Question25:-All of the following are common venting sites except

- A:-Right superior pulmonary vein
- B:-Root of aorta
- C:-Pulmonary artery
- D:-Right atrium

Correct Answer:- Option-D

Question26:-The following are true of retrograde cardioplegia except

- A:-Delivery rate is usually 200 ml/min
- B:-Pressure should not exceed 40 mm Hg
- C:-Provides good myocardial protection to the right ventricle
- D:-Can be delivered continuously into the coronary sinus

Correct Answer:- Option-C

Question27:-The pore size of an arterial filter is usually

- A:-0.1 micrometre
- B:-40 micrometre
- C:-200 micrometre
- D:-100 micrometre

Correct Answer:- Option-B

Question28:-Intraaortic balloon pump uses

- A:-Helium
- B:-Carbon dioxide
- C:-Nitrogen
- D:-Any of the above

Correct Answer:- Option-A

Question29:-The commonest cause of stroke on cardiopulmonary bypass is

- A:-Microembolism
- B:-Air embolism
- C:-Low perfusion pressure
- D:-Events during cannulation and clamping

Correct Answer:- Option-D

Question30:-In atherosclerotic aorta the best cannulation site is

- A:-Ascending aorta
- B:-Right innominate artery
- C:-Right subclavian artery
- D:-Femoral artery

Correct Answer:- Option-C

Question31:-Distal ischemia during peripheral cannulation can be prevented by

- A:-Using a large cannula
- B:-Cannulating via a side arm graft
- C:-Avoiding a separate distal perfusion cannula
- D:-Looping and snaring the artery that is cannulated

Correct Answer:- Option-B

Question32:-Mitral valve surgery commonly uses

- A:-Bicaval cannulation
- B:-Atriacaval cannulas
- C:-Single atrial cannula
- D:-Circulatory arrest

Correct Answer:- Option-A

Question33:-All are true regarding Activated Clotting Time (ACT) except

- A:-In offpump CABG ACT of 250 sec may be satisfactory
- B:-Correlates better with heparin concentration than high dose thrombin time
- C:-Usually measured 3 to 5 minutes after heparin administration
- D:-Normally should be above 480 seconds on CPB

Correct Answer:- Option-B

Question34:-Systemic flow rates at normothermia are usually

- A:-1.5 ltr/min/`m<sup>2</sup>`
- B:-1.2 ltr/min/`m<sup>2</sup>`
- C:-2.4 ltr/min/`m<sup>2</sup>`
- D:-2.0 ltr/min/`m<sup>2</sup>`

Correct Answer:- Option-D

Question35:-All are true of retrograde autologous priming except

- A:-Reduces haemodilutional effect of priming solution
- B:-An alpha agonist is used
- C:-Drainage of prime is from venous line
- D:-Most useful in large and over weight patients

Correct Answer:- Option-D

Question36:-Adequate tissue oxygen delivery is assessed by all except

- A:-Residual nitrogen saturation
- B:-Venous oxygen saturation
- C:-Blood lactate levels
- D:-Inline carbon dioxide monitoring

Correct Answer:- Option-A

Question37:-All the following are used to combat low systemic vascular resistance except

- A:-Terlipressin
- B:-Phenylephrine
- C:-Methylene blue
- D:-Dobutamine

Correct Answer:- Option-D

Question38:-Heart distension on bypass can produce all except

- A:-Pulmonary barotrauma
- B:-Ventricular cooling
- C:-Myocardial fibre stretching

D:-Increased pulmonary artery pressures

Correct Answer:- Option-B

Question39:-Cold hemagglutinin disease is

A:-Caused by Ig G antibodies

B:-Occurs in about 2% of general population

C:-A cause of myocardial infarction

D:-Aggravated by hemodilution

Correct Answer:- Option-C

Question40:-Indications for deep hypothermic circulatory arrest are all except

A:-Type A dissection

B:-Distal descending thoracic aneurysms

C:-IVC tumour resections

D:-Porcelain aorta

Correct Answer:- Option-B

Question41:-Retrograde Cerebral perfusion is

A:-Administered at 500 ml/min

B:-Pressures upto 40 mm Hg are used

C:-Best for long procedures under deep hypothermic circulatory arrest

D:-Effective in providing nutrition to the brain

Correct Answer:- Option-A

Question42:-In PAD CAB perfusion is provided to

A:-Right ventricle

B:-Cerebral circulation

C:-Coronary circulation

D:-Renal arteries

Correct Answer:- Option-C

Question43:-All of the following in cardioplegia prevent cell damage except

A:-Aspartate

B:-Glutamate

C:-Calcium channel blockers

D:-CPD

Correct Answer:- Option-C

Question44:-Controlled cross circulation was developed by

A:-Lillehei

B:-Gibbon

C:-Cohen

D:-De Wall

Correct Answer:- Option-A

Question45:-Cardioplegia was first used by

A:-Martin

B:-Kirklin

C:-Drew

D:-Melrose

Correct Answer:- Option-D

Question46:-The following factors influence venous drainage except

A:-Flow Characteristics

B:-Pressure applied to the venous reservoir

C:-Tip style of cannula

D:-None of the above

Correct Answer:- Option-D

Question47:-Which size tubing is not commonly used in cardiopulmonary bypass

A:-1/4 inch

B:-3/8 inch

C:-3/16 inch

D:-1/8 inch

Correct Answer:- Option-D

Question48:-Centrifugal pumps are all except

A:-more expensive

B:-afterload dependant

C:-Reduce priming volume

D:-Is non occlusive

Correct Answer:- Option-C

Question49:-Ultrafiltration rates in continuous ultrafiltration are significantly affected by all except

A:-Oncotic pressures

B:-True membrane pressures

C:-Haematocrit

D:-Filter characteristics

Correct Answer:- Option-A

Question50:-Carbogen is used in

A:-pH stat strategy

B:-Alpha stat strategy

C:-Both of the above

D:-None of the above

Correct Answer:- Option-A

Question51:-True membrane oxygenators use

A:-Polymethyl methacrylate

B:-Polypropylene

C:-Microporous polypropylene

D:-Silicone

Correct Answer:- Option-D

Question52:-Protein denaturation occurs above

A:-40° C

B:-42° C

C:-38° C

D:-40.5° C

Correct Answer:- Option-B

Question53:-Which oxygenator has the smallest priming volume ?

A:-Lilliput 1

B:-Lilliput 2

C:-Terumo capiox baby Rx 05

D:-Terumo capiox Sx 10

Correct Answer:- Option-C

Question54:-All are important buffers except

A:-Bicarbonate

B:-Phosphate

C:-Chloride

D:-Haemoglobin

Correct Answer:- Option-C

Question55:-Ectotherm physiology is used in

A:-Alpha stat

B:-pH stat

C:-Hemodilution

D:-Rewarming

Correct Answer:- Option-A

Question56:-All are advantages of deep hypothermic circulatory arrest in children except

A:-Improved exposure

B:-Avoidance of multiple cannulas

C:-Better organ preservation

D:-Reduced oedema

Correct Answer:- Option-C

Question57:-Advantages of iliac cannulation are all except

A:-Can be performed prior to surgery

B:-Easier dissection than femoral artery

C:-Larger cannula than femoral artery can be used

D:-Cannulation in a clean area

Correct Answer:- Option-B

Question58:-Which valve is not normally tricuspid ?

A:-Aortic

- B:-Mitral
- C:-Tricuspid
- D:-Pulmonary

Correct Answer:- Option-B

Question59:-All are true of left superior venacave except

- A:-Most commonly opens into the coronary sinus
- B:-Runs anterior to the heart
- C:-May be cannulated
- D:-Does not cause volume overload of the heart

Correct Answer:- Option-B

Question60:-Aortic cross clamping is done early in

- A:-Significant aortic regurgitation
- B:-Truncus arteriosus
- C:-Aortopulmonary window
- D:-All of the above

Correct Answer:- Option-D

Question61:-The oxygenator initially used by Gibbon was a

- A:-Bubble oxygenator
- B:-Film oxygenator
- C:-True membrane oxygenator
- D:-Microfibre oxygenator

Correct Answer:- Option-B

Question62:-Heparin was discovered by

- A:-Bigelow
- B:-De Bakey
- C:-Lillehei
- D:-McLean

Correct Answer:- Option-D

Question63:-All the following changes happen on cardiopulmonary bypass except

- A:-Increased ACTH in nopsatite CPB
- B:-Growth hormone increases
- C:-Elevation of stress hormones
- D:-Hyperglycemia

Correct Answer:- Option-A

Question64:-Tissue oxygen delivery is easily measured by

- A:-Mixed venous oxygen saturation
- B:-2, 3 diphosphoglycerate
- C:-Oxygen dissociation curve
- D:-Catecholamine assay

Correct Answer:- Option-A

Question65:-Heparin is safe as an anticoagulant for extracorporeal circulation because of

- A:-Short duration for maximal action
- B:-Long half life
- C:-Absence of monitoring systems
- D:-Platelet aggregation

Correct Answer:- Option-A

Question66:-All are true of magnesium except

- A:-It is a membrane stabiliser
- B:-Stimulates catecholamine release
- C:-Has important role in aerobic metabolism
- D:-Helps maintain cellular integrity

Correct Answer:- Option-B

Question67:-All are phosphodiesterase type 3 inhibitors except

- A:-Amrinone
- B:-Milrinone
- C:-Enoximone
- D:-Dopexamine

Correct Answer:- Option-D

Question68:-Which of the following increases cerebral emboli ?

- A:-Arterial filter
  - B:-Cardiotomy
  - C:-Moderate hypothermia
  - D:-Alpha stat strategy
- Correct Answer:- Option-B

Question69:-Which of the following is a contraindication to early extubation ?

- A:-Hemodynamic stability
  - B:-Minimal bleeding
  - C:-Hypothermia
  - D:-Neurological stability
- Correct Answer:- Option-C

Question70:-All are parts of a gas flow path except

- A:-Scavenging facility
  - B:-Oxygenator
  - C:-Gas blender
  - D:-Heat exchanger
- Correct Answer:- Option-D

Question71:-All are sites of temperature measurement except

- A:-Colon
  - B:-Tympanic membrane
  - C:-Bladder
  - D:-Oesophagus
- Correct Answer:- Option-A

Question72:-Heparin resistance is caused by all except

- A:-Endocarditis
  - B:-Antithrombin 3 deficiency
  - C:-Preoperative heparin therapy
  - D:-Obesity
- Correct Answer:- Option-D

Question73:-Alternate pathway of complement activation begins with

- A:-`C\_(1)`
  - B:-`C\_(2)`
  - C:-`C\_(3)`
  - D:-`C\_(4)`
- Correct Answer:- Option-C

Question74:-Tissue oxygen consumption in pulsatile CPB when compared to non pulsatile is

- A:-Less
  - B:-More
  - C:-Same
  - D:-Not known
- Correct Answer:- Option-B

Question75:-Hyperglycemia in CPB causes

- A:-Favourable neurological outcome
  - B:-Adverse neurological outcome
  - C:-No significant change in neurological outcome
  - D:-None of the above
- Correct Answer:- Option-C

Question76:-Which of the following is a neuroprotective strategy ?

- A:-Multiple cross clamping
  - B:-Vein grafts in CABG
  - C:-Aortic cannulation
  - D:-Hypothermia
- Correct Answer:- Option-D

Question77:-To avoid uneven cooling the gradient between water and blood should be less than

- A:-10° C
  - B:-12° C
  - C:-14° C
  - D:-16° C
- Correct Answer:- Option-A



Question78:-Neutral human pH at temperature of 20° C is

- A:-7.7
- B:-7.4
- C:-7.2
- D:-7.5

Correct Answer:- Option-A

Question79:-Which of the following is a myocardial protection strategy ?

- A:-Systematic hypothermia
- B:-Cardioplegic arrest
- C:-Topical hypothermia
- D:-All the above

Correct Answer:- Option-D

Question80:-A one way valve placed in the arterial line is designed to prevent

- A:-Forward flow
- B:-Retrograde flow
- C:-Sucking air from cannulation site
- D:-Overpressurisation

Correct Answer:- Option-B

Question81:-The minimum acceptable range of haematocrit on CPB is

- A:-18-21%
- B:-16-18%
- C:-21-24%
- D:-more than 25%

Correct Answer:- Option-A

Question82:-When using a centrifugal pump one must always maintain ?

- A:-forward flow and positive pressure
- B:-forward flow and negative pressure
- C:-forward flow at 4000 rpm
- D:-forward flow except in RAP

Correct Answer:- Option-A

Question83:-Which of the following is observed when an oxygenator begins to clot ?

- A:-A low membrane pressure gradient
- B:-High arterial line pressure
- C:-High MAP
- D:-High membrane pressure gradient

Correct Answer:- Option-D

Question84:-To ensure proper communication with surgeon a perfusionist must always

- A:-answer promptly
- B:-repeat surgeons orders
- C:-talk to anaesthesiologist
- D:-document all orders

Correct Answer:- Option-B

Question85:-The best method to monitor cerebral oxygen delivery is

- A:-Cerebral oximetry
- B:-Venous oxygen saturation
- C:-Inline blood gas monitoring
- D:-Arterial saturation monitor

Correct Answer:- Option-A

Question86:-Which aortic cannula has embolism protection ?

- A:-Embol
- B:-Biomedicus
- C:-EOPA
- D:-Femflex

Correct Answer:- Option-A

Question87:-What is not true of left dominant circulation ?

- A:-Seen in about 20% population
- B:-Left circumflex artery supplies PDA
- C:-Left circumflex artery gives off obtuse marginal
- D:-Left circumflex artery may originate from right coronary sinus

Correct Answer:-**Question Cancelled**

Question88:-Which of the following is not an indication for CABG ?

- A:-LMCA disease more than 60%
- B:-Proximal LAD disease
- C:-Double vessel disease with normal LAD
- D:-Triple vessel disease with low ejection fraction

Correct Answer:- Option-C

Question89:-All are advantages of roller pump except

- A:-Simple
- B:-Low priming volume
- C:-Afterload independent cardiac output
- D:-Less cavitation if inflow occluded

Correct Answer:- Option-D

Question90:-Venous drainage can be improved by all except

- A:-Aortic cardioplegia
- B:-Surgeon adjusting venous cannula
- C:-Raising operating table
- D:-Suction on venous reservoir

Correct Answer:- Option-A

Question91:-Cardioplegia is administered into the main pulmonary artery in

- A:-Aortic regurgitation
- B:-Anomalous left coronary artery origin from pulmonary artery
- C:-Patent ductus arteriosus
- D:-Hypoplastic left heart

Correct Answer:- Option-B

Question92:-Cardioplegia entering systemic circulation causes

- A:-Reduced SVR
- B:-Increased SVR
- C:-No change in SVR
- D:-None of the above

Correct Answer:- Option-A

Question93:-Where are drugs administered in CPB ?

- A:-Central venous line
- B:-CPB circuit
- C:-Cardioplegia circuit
- D:-Arterial monitoring line

Correct Answer:- Option-B

Question94:-The level of which of the following falls during CPB ?

- A:-Calcium
- B:-Magnesium
- C:-Both of the above
- D:-None of the above

Correct Answer:- Option-C

Question95:-Oedema is caused by

- A:-Decreased capillary pressure
- B:-Decreased plasma colloid osmotic pressure
- C:-Decreased tissue colloid osmotic pressure
- D:-Increase plasma oncotic pressure

Correct Answer:- Option-B

Question96:-Vitamin K dependant clotting factors are all except

- A:-II
- B:-V
- C:-VII
- D:-X

Correct Answer:- Option-B

Question97:-In a Waterston shunt the connection is between

- A:-Aorta and MPA
- B:-SVC and RPA
- C:-Aorta and RPA

D:-Aorta and LPA

Correct Answer:- Option-C

Question98:-All are types of VSD except

A:-Subaortic

B:-Subpulmonic

C:-Inlet

D:-Secondum

Correct Answer:- Option-D

Question99:-In a proper IABP placement the tip is

A:-in ascending aorta

B:-just distal to left subclavian origin

C:-at aortic bifurcation

D:-in main pulmonary artery

Correct Answer:- Option-B

Question100:-Retrograde cardioplegia is comtraindicated in

A:-Aortic regurgitation

B:-Aortopulmonary window

C:-Aortic stenosis

D:-Unroofed coronary sinus

Correct Answer:- Option-D