

MCh (CVTS) Entrance Examination – Academic Session 2017

Total marks: 100 Time: 90 minutes

Answers all questions. Select the most appropriate answer. There will be no negative marks.

1. The following are absorbable sutures except
 - a. Catgut
 - b. Polypropylene
 - c. Polyglyconate
 - d. Polyglactin

2. The following are true about Peutz Jeghers syndrome except
 - a. Often presents with anaemia in childhood
 - b. Is characterised by circumoral mucocutaneous pigmented lesions
 - c. Is associated with adenomatous polyps of the small intestine
 - d. Malignant change occurs in 2-3% of polyps

3. Regarding peptic ulceration, all are true except
 - a. Duodenal is more common than gastric ulceration
 - b. Zollinger – Ellison syndrome is associated with gastrin hyposecretion
 - c. H₂-blockers will heal 85-95% of duodenal ulcers in 8 weeks
 - d. Triple therapy can eradicate H. pylori in 80% of patients in one week

4. During surgery on the submandibular gland
 - a. An incision on the lower of the mandible is safe
 - b. The submandibular gland is seen to wrap around the posterior border of mylohyoid
 - c. The facial artery and vein are divided as they course through the deep part of the gland
 - d. The hypoglossal nerve is seen to loop under the submandibular

5. Regarding pancreatic carcinoma, all are true except
 - a. 90% are ductal adenocarcinomas
 - b. Less than 20% occur in the head of the gland
 - c. The usual presentation is with pain, weight loss and obstructive jaundice
 - d. Ultrasound has a sensitivity of 80-90% in the detection of the tumour

6. All are true about stones in the common bile duct, except
 - a. Can present with charcot's Triad
 - b. Are suggested by an bile duct diameter > 8mm on ultrasound
 - c. ERCP, sphincterotomy and balloon clearance is now the treatment of choice
 - d. If removed by exploration of the common bile duct the T-tube can be removed after 3 days

7. Regarding abdominal wall hernias, all are true except
 - a. 20% of inguinal hernias are indirect
 - b. In women inguinal hernias are as common as femoral hernias
 - c. The mortality associated with strangulation is over 10%
 - d. Excessive abdominal wall fat is a risk factor

8. All about the femoral canal are true, except
 - a. Lies lateral to the femoral vein
 - b. Has the inguinal ligament as its anterior border
 - c. Has the lacunar ligament as its lateral border
 - d. Has the pectineal ligament as its posterior border

9. Intermittent claudication
 - a. Is usually associated with an ankle / brachial pressure index (ABPI) > 0.7
 - b. Is associated with a fall in the ABPI on exercise with delayed recovery
 - c. Has been classified by Gleason
 - d. Is associated with pain on taking the first step

10. Regarding benign breast disease
 - a. Cyclical mastalgia is the commonest reason for referral to the breast clinic
 - b. Fibroadenomas are derived from the breast lobule
 - c. Lactational breast abscesses are usually due to Staph aureus
 - d. All of the above

11. Regarding anal fissures, all are true except
 - a. 10% occur in the posterior midline
 - b. Multiple fissures suggest a diagnosis of Tuberculosis or Crohn's Disease
 - c. 50% of acute fissures heal with the use of a bulking agent
 - d. Sphincterotomy has a success rate of over 90%

12. Warfarin
 - a. Reduces the concentration of vitamin A dependent clotting factors
 - b. Has a half life of about 36 hours
 - c. Crosses the placenta and should be avoided in pregnancy
 - d. Doses should be reduced in liver disease

13. Regarding Heparin, all are true except
 - a. Potentiates the actions of antithrombin 3
 - b. Has a half life of 12 hours
 - c. Can be reversed by protamine sulphate
 - d. Can induce an idiosyncratic thrombocytopenia

14. Regarding rectal cancer
 - a. It often arises in metaplastic polyps
 - b. The rectum is the commonest site of colorectal tumours
 - c. A cancer in the upper 1/3 of the rectum appropriately managed by AP resection
 - d. Chemotherapy is of proven benefit in Duke's A tumours

15. The following cause hypercalcaemia, except
- Sarcoidosis
 - Primary hyperthyroidism
 - Acute pancreatitis
 - Metastatic bronchial carcinoma
16. Regarding malignant melanoma
- The incidence is halving every 10 years
 - Superficial spreading melanoma is the commonest clinico-pathological type
 - Regional lymphadenectomy provides survival benefit in patients with "thick" tumours
 - Acral lentiginous tumours are usually found on the trunk and proximal limbs
17. Regarding oesophageal cancer
- Squamous carcinomas predominate in the upper 2/3 of the oesophagus
 - Tylosis genetically predisposes to the disease
 - 15% of adenocarcinomas are associated with Barrett's oesophagus
 - All of the above are true
18. Infantile hypertrophic pyloric stenosis
- Occurs with a male : female ratio of 4:1
 - Invariably presents between six and eight months of age
 - Typically presents with bile stained projectile vomiting
 - Surgical treatment is by Heller's cardiomyotomy
- 19: Regarding oesophageal atresia, all are true except
- Is often associated with a distal trachea-oesophageal fistula
 - Polyhydramnios is often present late in pregnancy
 - 50% have other associated congenital abnormalities
 - Contrast X-ray studies are necessary to confirm the diagnosis
20. The functions of a tracheostomy are to
- Bypass an upper airway obstruction
 - Increase the anatomical dead space
 - Increase airway resistance
 - Protect against infection
21. All the murmurs decrease in length and intensity with the valsalva manouevere except in
- Mitral stenosis
 - Aortic stenosis
 - Tricuspid stenosis
 - HOCM
22. All are true about opening snap in Mitral stenosis except
- A2-OS interval is indicative of severity of disease
 - Can be absent with severe calcification
 - A high pitched early systolic sound
 - Occurs earlier than the Tricuspid opening snap

23. The Sokolow-Lyon ECG criteria for LV hypertrophy requires that the sum of the S wave in V1 and the R wave in V5 or V6 be
- More than 3.5 mV
 - Less than 2.5 mV
 - More than 2.5 mV
 - None of the above
24. All of the following are loop diuretics, except
- Furosemide
 - Torsemide
 - Bumetanide
 - Metolazone
25. The drugs with proven survival benefit in the treatment of cardiac failure
- Beta-blockers
 - Diuretics
 - Calcium-channel blockers
 - Digoxin
26. Ebstein's anomaly
- Is associated with maternal intake of Lithium
 - Can only be right-sided
 - The septal tricuspid leaflet is always spared
 - Is associated with WPW syndrome in 50% of cases
27. Marfan's syndrome
- Is autosomal co-dominant
 - Presents commonly with aortic dissection
 - Has hypermobile joints as a major manifestation
 - Has Mitral valve prolapse as the most common cardiac lesion
28. Barlow's syndrome
- Is more common in females
 - Affects 25% of the general population
 - Is also called the 'diastolic -click' syndrome
 - Frequently requires intervention
29. Among the physical signs of Aortic Regurgitation, severity is suggested by
- Water-Hammer pulse
 - Hill's sign
 - Corrigan's sign
 - Traube's sign
30. Loud S1 is associated with all except
- Mitral stenosis
 - Right Bundle branch block
 - Ebstein's anomaly
 - Mitral Valve prolapse

31. Scimitar syndrome includes
- Anomalous pulmonary venous drainage
 - Anomalous arterial supply to lung
 - Pulmonary artery hypoplasia
 - All of the above
32. Kussmaul's sign (increase rather than normal decrease in CVP during inspiration) is seen in
- Cardiac tamponade
 - Constrictive pericarditis
 - Restrictive cardiomyopathy
 - Right-sided pneumothorax
33. Patient presenting with fever and chest pain , four weeks after open heart surgery, with raised leucocyte count probably has
- Mediastinitis
 - Superficial surgical site infection (SSI)
 - Dressler's syndrome
 - Perioperative MI
34. Criteria aiding in the diagnosis of prosthetic valve infective endocarditis are the
- Carpentier criteria
 - McGoon risk propensity ratio
 - Duke criteria
 - Jones criteria
35. The current gold standard for coronary artery anatomy is
- Coronary angiography
 - Cardiac MRI with contrast
 - 64-slice Hi-Definition CT
 - Ultra-fidelity Doppler ultrasound
36. All of the following are associated with Raynaud's phenomenon, except
- Arterial insufficiency
 - Scleroderma
 - Deep Vein thrombosis
 - SLE
37. Milirone has the following characteristics , except
- Phosphodiesterase-3 inhibitor
 - Inodilator
 - Survival benefit in cardiac failure
 - Useful in cases with RV dysfunction
38. The most common source of systemic emboli-
- Femoral Veins
 - Popliteal Veins
 - Iliac Veins
 - Heart chambers

39. Lung carcinoma associated with paraneoplastic syndrome is
- Squamous cell carcinoma
 - Adenocarcinoma
 - Small cell carcinoma
 - Large cell carcinoma
40. The most common cause of Haemoptysis in mitral stenosis is
- Pulmonary apoplexy
 - Pulmonary venous hypertension
 - Co-existent pulmonary Tuberculosis
 - 'Winter ' bronchitis
41. The rare cardiac manifesation of Congenital Rubella syndrome is
- Patent ductus arteriosus
 - Pulmonary stenosis
 - Atrial septal defect
 - Congenital deafness
42. The most convenient formula for estimating blood or blood substitute replacement in a burns patient in the first 48 hours is based on
- Hematocrit & hemoglobin estimation
 - Blood volume determination
 - Percent of burned surface
 - Body Wt. & burned surface
43. A localized area of redness & swelling with several discharging sinuses is most likely,
- Pyogenic granuloma
 - A sinus
 - An abscess
 - Carbuncle
44. An ill defined swelling of the breast in a young woman often painful with menstruation suggests,
- Endometriosis
 - Fibroadenosis
 - Intraductal papilloma
 - Fibroadenoma
45. The earliest & most constant finding in Ca. rectum,
- Tenesmus
 - Bleeding per anus
 - Loss of weight
 - Alternation of bowel habit

46. Golf hole ureteric orifice in cystoscopy is seen in,
- TB cystitis
 - Megaloureter
 - Ureterocele
 - All
47. Common bile duct exploration is indicated in all except
- CBD diameter > 1 cm
 - Raised alkaline phosphatase
 - Multiple GB stones
 - Past h/o jaundice
48. Most common type of Ca Breast
- Adenocarcinoma
 - Squamous cell Ca
 - Lobular Ca
 - Liposarcoma
49. Cork screw appearance in barium esophagogram seen in
- Achalasia
 - Diffuse esophageal spasm
 - Nut cracker esophagus
 - Esophageal duplication cyst
50. Least malignant & least common type of malignant melanoma
- Acral lentiginous
 - Superficial spreading
 - Lentigo maligna
 - Nodular
51. Most common cause of hematemesis & melaena
- Acute peptic ulcer
 - Chronic peptic ulcer
 - Variceal bleeding
 - All
52. External location of a branchial fistula
- Upper 1/3 of neck
 - Middle 1/3 of neck
 - Lower 1/3 of neck
 - Upper face
53. Secondary hemorrhage occurs after
- Immediately after surgery
 - 3-4 days after surgery
 - 7-14 days after surgery
 - One month after surgery

54. Mondor's disease is
- Superficial thrombophlebitis of breast
 - Deep vein thrombosis
 - Burgers disease
 - Rheumatic thrombophlebitis
55. Turban tumour
- Basal cell Ca
 - Cylindroma
 - Squamous cell Ca
 - TB
56. Most common type of mesenteric cyst
- Enterogenous
 - Mixed dermoid
 - Chylolymphatic
 - None of the above
57. Premalignant condition of gall bladder
- Strawberry GB
 - Pyocele
 - Porcelain GB
 - None
58. Twenty year old with familial polyposis should be managed by,
- Frequent evaluation
 - Ileostomy
 - Resection of involved segment of small intestine
 - Total colectomy with ileostomy
59. Surgical treatment of Hirschprung's disease
- Duhamel operation
 - Modified Duhamel operation
 - Swenson operation
 - All
60. Becks triad in cardiac tamponade include all except
- Muffled heart sounds
 - Distended neck veins
 - Hypotension
 - Tachycardia
61. Normal alveolar ventilation per breath
- 500 ml
 - 350 ml
 - 150 ml
 - 5.25 Litres

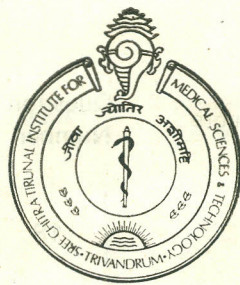
62. Vital capacity is
- Functional residual capacity + tidal volume
 - Inspiratory + functional residual capacity
 - Inspiratory capacity + expiratory reserve volume
 - Inspiratory reserve volume + expiratory reserve volume
63. All of the following are major functions of surfactant except
- Lowers surface tension in the alveoli
 - Surface tension reduction is more in smaller alveoli than larger ones
 - Reduces capillary filtration forces
 - Surface tension reduction is more in larger alveoli than smaller ones
64. Not true about obstructive respiratory disease
- Increased total lung capacity
 - Decreased FEV1
 - Decreased residual volume
 - Increased functional residual capacity
65. Oxygen – Haemoglobin dissociation curve shifts to left in
- Increased temperature
 - Increased PH
 - Increased 2,3 DPG
 - Increased PCO2
66. Major form of transportation of CO2 in Blood is
- Carb-amino haemoglobin
 - Dissolved CO2
 - Bicarbonate
 - None of the above
67. The first successful Arterial Switch operation was performed by
- Yacoub
 - Jatene
 - Senning
 - Kirklin
68. True about ventilation – perfusion ratio of lung
- At apex is close to 1
 - At base is close to 1
 - Is more at the base than at the apex
 - Is equal throughout all lung fields
69. Phase 4 depolarization of SA node is due to
- Opening of sodium channels
 - Influx of potassium
 - Opening of calcium channels
 - Closing of potassium channels

70. Plateau phase of Action Potential in cardiac muscle fibre is due to
- Opening of fast sodium channels
 - Closure of potassium channels
 - Opening of slow calcium channels
 - Closing of sodium channels
71. Rastelli's classification is used for
- Atrial septal defects
 - Ventricular septal defects
 - Atrio-ventricular septal defects
 - Aorto-pulmonary window
72. Arterial blood gas analysis values given below suggest:
- | | |
|------------------------------|---------------------------|
| PH 7.620 | PCO ₂ 46 mm Hg |
| HCO ₃ - 30 mEq/ml | PO ₂ 98 mm Hg |
- Uncompensated respiratory alkalosis
 - Compensated respiratory alkalosis
 - Partially compensated metabolic alkalosis
 - Compensated metabolic acidosis
73. Using PEEP(positive-end-expiratory-pressure) in a ventilated post-operative cardiac surgical patient is associated with
- Decrease in blood pressure
 - Decrease in systematic vascular resistance
 - Increase in cardiac output
 - Decrease in heart rate
74. Low cardiac output is characterized by all except
- Rising serum potassium
 - Rising peripheral temperature
 - Decrease in urine output
 - Rise in CVP
75. Cardiac output is equivalent to
- Product of stroke volume and heart rate
 - Product of pulse pressure and systemic vascular resistance
 - Product of systemic vascular resistance and mean arterial pressure
 - None of the above
76. In a post operative cardiac surgical patient with low blood pressure and cardiac output, with decreased systemic vascular resistance and PCWP, the ideal initial intervention would be
- Diuretic therapy
 - Inotrope therapy
 - Vasodilator therapy
 - Volume challenge

77. Dobutamine is known to
- Increase systemic vascular resistance
 - Increase pulmonary capillary wedge pressure
 - Increase in heart rate
 - Decrease cardiac index
78. Syphilitic aortic aneurysms most commonly involve
- Ascending aorta
 - Arch of aorta
 - Descending thoracic aorta
 - Abdominal aorta
79. The most common post-operative atrial arrhythmia is
- Supraventricular tachycardia
 - Atrial fibrillation
 - Atrial flutter
 - AVNRT
80. Barrett's esophagus
- Predisposes to squamous cell carcinoma
 - Contains mucin secreting goblet cells
 - Has a male : female ratio of 1 : 3
 - Is lined with cuboidal epithelium
81. The day 29 November 1944 is important in the history of cardiac surgery because of the first successful performance of
- PDA interruption
 - BT shunt
 - ASD closure
 - Valve replacement
82. In a bi-directional Glenn shunt anastomosis is done between
- Side of SVC and end of pulmonary artery
 - Side of IVC and end of pulmonary artery
 - End of the SVC and side of pulmonary artery
 - End of IVC and side of pulmonary artery
83. All the following cyanotic heart disease can produce congestive cardiac failure in infancy except
- Total anomalous pulmonary venous connection
 - Truncus arteriosus
 - Transposition of great arteries
 - Tetralogy of Fallot
84. Which of the following is not used for closure of atrial septal defects
- Mid sternotomy
 - Partial sternotomy
 - Left thoracotomy
 - Right thoracotomy

85. Wide fixed split of second heart sound in heart in
- Atrial septal defect
 - Partial AV canal defect
 - Total anomalous pulmonary venous connection
 - All of the above
86. All the following inotropes reduce systemic vascular resistance except
- Milrinone
 - Dopamine
 - Dobutamine
 - Isoproterenol
- 87: Which of the following is not an antifibrinolytic agent
- Aprotinin
 - Doxapran
 - Epsilon aminocaproic acid
 - Tranexamic acid
88. In a low cardiac output state, the mixed venous oxygen saturation will typically be
- Unaltered
 - High
 - Low
 - Variable
89. Which of the following is not useful in the treatment of cyanotic spells
- Oxygen
 - Morphine
 - Vasodilators
 - B blockers
90. The most common type of total anomalous pulmonary venous connection is
- Cardiac
 - Supra cardiac
 - Infra cardiac
 - Mixed
91. Pulmonary hypertensive crisis is precipitated by all except
- Inadequate sedation
 - Hypoxia
 - Hypercapnea
 - Metabolic alkalosis
92. Which of the following is not a feature of Tetralogy of Fallot
- Unrestrictive VSD
 - RV volume overload
 - Over riding aorta
 - Pulmonary stenosis

93. In a normal heart, which of the following valves is not in fibrous continuity with others
- Pulmonary valve
 - Aortic valve
 - Mitral valve
 - Tricuspid valve
94. Eustachian valve is related to the opening of
- SVC
 - Coronary
 - IVC
 - Pulmonary veins
95. Moderator band contains
- SA node
 - Bundle of His
 - Right bundle branch
 - Left bundle branch
96. Which of the following is closely related to the ductus arteriosus
- Left recurrent laryngeal nerve
 - Right recurrent laryngeal nerve
 - Left phrenic nerve
 - Right phrenic nerve
97. Walton .C. Lillehei's name is associated with the first successful performance of all the following except
- ASD closure
 - VSD closure
 - AV canal defect correction
 - Artificial pacemaker
98. In a fetal circulation, which of the following vessels would carry the least saturated blood
- Umbilical vein
 - Ductus venosus
 - Ascending Aorta
 - Ductus arteriosus
99. The duration of atrial systole in normal cardiac cycle is
- 0.1 s
 - 0.3 s
 - 0.5 s
 - 0.8 s
100. Opening of semilunar valves produce
- First heart sound
 - Second heart sound
 - Opening snap
 - Ejection click



SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY

THIRUVANANTHAPURAM

FOR EXAMINER'S USE ONLY

Total Score Awarded	
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FOR CANDIDATE'S USE

WRITE IN WORDS
No. of questions attempted

Roll Number

Name of Examination : Entrance Examination Mch - CUTS 2017

Date of Examination : 10/11/2016

INSTRUCTIONS

1. Record your roll number as soon as you get this book.
2. Fill up particulars of examination.
3. Write your choice answer to each question in the space provided for answering.
4. LEAVE THE SCORE COLUMN BLANK.
5. Use blue / black / blue-black ink (fountain / ball pen).
6. Do not erase or overwrite or smudge.
7. Should you wish to alter the answer already recorded, run a line across the answer written and write your alternative answer by its side leaving some space between.
8. At the end of the examination write IN WORDS the number of questions attempted, in the space provided. Do not leave it blank.
9. INDICATE YOUR ANSWER USING ONLY CAPITAL LETTERS.

Question Number

Space for answer

Score

Question Number

Space for answer

Score

1

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