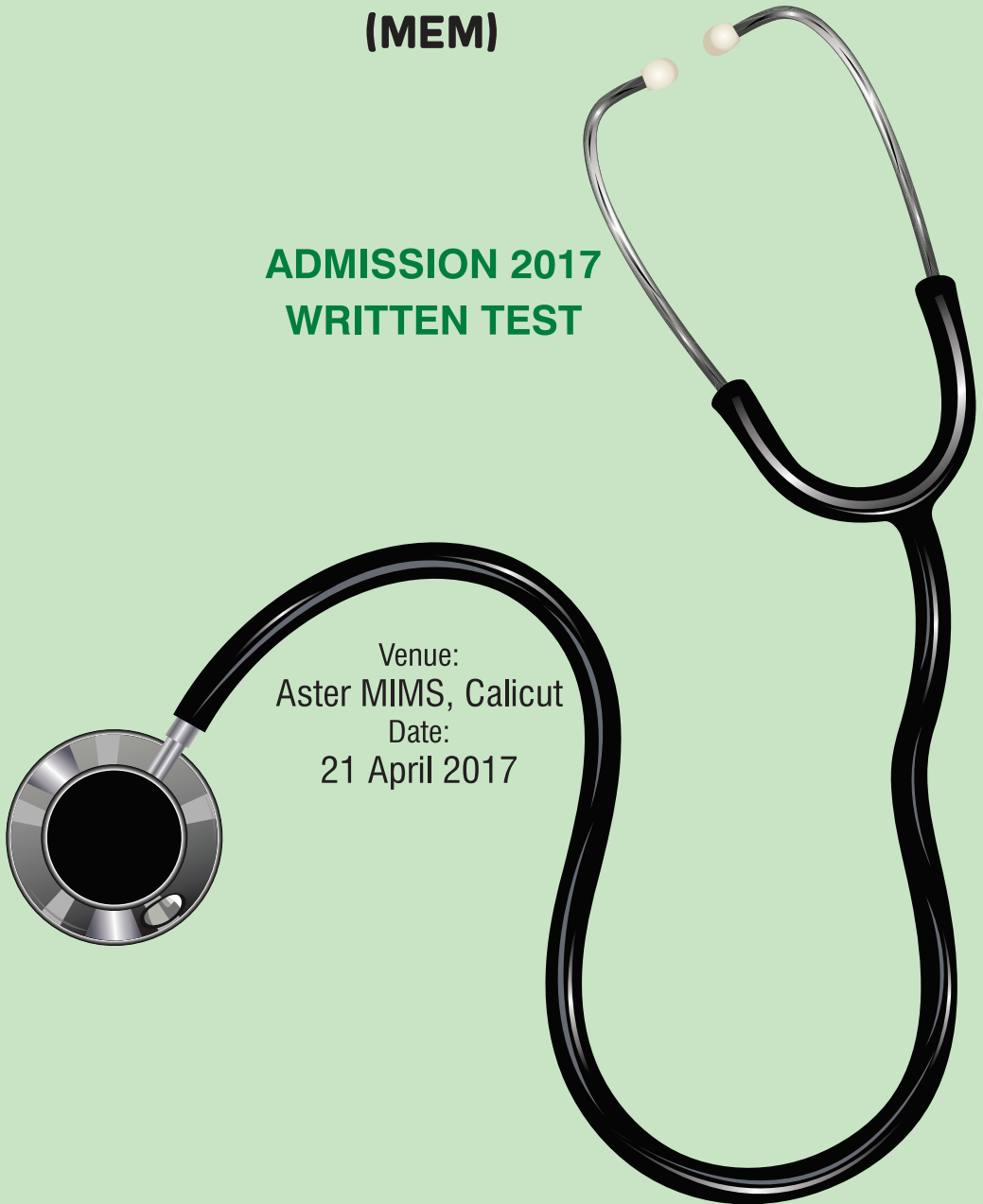




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# MASTERS IN EMERGENCY MEDICINE (MEM)

ADMISSION 2017  
WRITTEN TEST



Venue:  
Aster MIMS, Calicut  
Date:  
21 April 2017



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## MASTERS PROGRAM IN EMERGENCY MEDICINE

### **Screening test for admission to MEM 2017 Batch under GWU**

#### Direction:

- ♦ Answer all questions
- ♦ No negative marks
- ♦ 50 objective multiple choice single response questions-each correct answer carrying one mark
- ♦ Time: 1 hour
- ♦ Score will be added to total interview score
- ♦ Don't write on question paper
- ♦ Mark correct answer using HP pencil



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1. Cardiac output is affected by

- a) Heart rate & stroke volume
- b) Stroke volume alone
- c) Arterial blood pressure alone
- d) Heart rate alone

2. Which of the following conditions requires emergent urologic consultation?

- a) Balanitis
- b) Balanoposthitis
- c) Paraphimosis
- d) Phimosis
- e) Posthitis

3. Left main coronary artery divides into

- a) LAD & circumflex arteries
- b) Left posterior descending & LAD Artery
- c) Left posterior descending & circumflex arteries
- d) LAD & right main coronary arteries

4. Which of the following have a vasodilatory effect

- a) Angiotension
- b) Endothelin
- c) Renin
- d) Nitric Oxide



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5. Stroke volume =

- a) End Systolic volume - End diastolic volume
- b) HR x End systolic volume
- c) End diastolic volume - End systolic volume
- d) HR x End diastolic volume

6. What is the most common complication of hemodialysis?

- a) Air embolism
- b) Hyperphosphatemia
- c) Hypocalcemia
- d) Hypoglycemia
- e) Hypotension

7. Which of the following pancreatic cells produces glucagon ?

- a) Acini Cells
- b) Alpha Cells
- c) Beta Cells
- d) Delta cells
- e) Gamma Cells

8. Which of the following is a cause of high anion gap acidosis ?

- a) Adrenal Insufficiency
- b) Lithium Overdose
- c) Diarrhoea
- d) Methanol Overdose
- e) Renal Tubular Acidosis



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9. Vital Capacity is calculated by which of the following ?

- a) Tidal Volume + Inspiratory Capacity
- b) Inspiratory reserve volume + Expiratory reserve volume
- c) Inspiratory reserve volume + Expiratory reserve volume + Tidal Volume
- d) Inspiratory Capacity + Functional residual volume
- e) Total lung capacity – functional residual volume

10. You are discussing mean arterial pressure (MAP) with your consultant whilst seeing a patient. The consultant asks you to calculate the MAP of a patient. The Observations are -

Blood Pressure: 120/90 mm Hg

Central Venous Pressure : 15 cmH<sub>2</sub>O

Heart rate : 80

What is the MAP ?

- a) 86 mmHg
- b) 92 mmHg
- c) 95 mmHg
- d) 100mmHg
- e) 110mmHg

11. Type 3 Hypersensitivity is usually mediated by which of the following type of antibody ?

- a) IgA
- b) IgD
- c) IgE
- d) IgM
- e) IgG



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12. Healing by first intention can occur in which of the following ?
- a) Abrasion
  - b) Surgical Incision
  - c) Burns
  - d) Lacerations
  - e) Puncture wound
13. C 1 esterase inhibitor deficiency leads to which of the following conditions ?
- a) SLE
  - b) Increased susceptibility to HIV
  - c) Hereditary Angioedema
  - d) Paroxysmal Nocturnal Haemoglobinuria
  - e) Thrombotic thrombocytopenia purpura
14. Salbutamol may cause all except
- a) Hyperkalemia
  - b) decreased PO<sub>2</sub> initially
  - c) skeletal muscle tremor
  - d) nervousness
15. A patient arrives in the Emergency Department staggering, agitated, hyperthermic with dilated pupils. Which is least likely to produce this effect
- a) Atropine Over Dose
  - b) Amphetamine Over Dose
  - c) Aspirin Over Dose
  - d) BetaBlocker Over Dose



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16. 36/M had an RTA , skid and fall from a bike . He has an isolated injury to the left forearm.



Name the eponymous fracture.

- a) Galeazzi fracture - dislocation
- b) Colles fracture
- c) Hutchinson fracture
- d) Monteggia fracture dislocation



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17. 29/M with 2 weeks history of high grade fever , productive cough comes into the ED in florid sepsis



X-ray diagnosis :

- a) Left lower zone pneumonia consolidation
- b) Lung abscess
- c) Left loculated effusion
- d) ARDS





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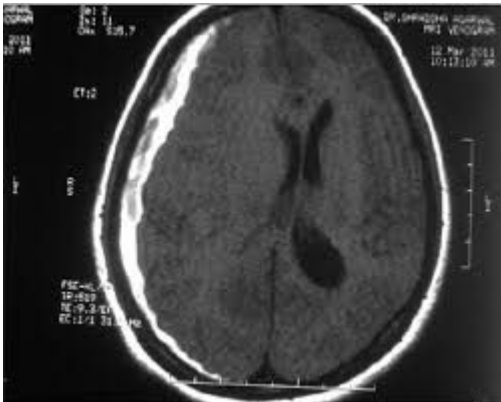


18. Which option explains the above spotter the BEST :



- a) Hyphema
- b) Hypopyon
- c) Acute Uveitis
- d) Conjunctival chemosis

19. 22/M presented to the ED after an RTA. The following is the CT of the patient.



The CT depicts :

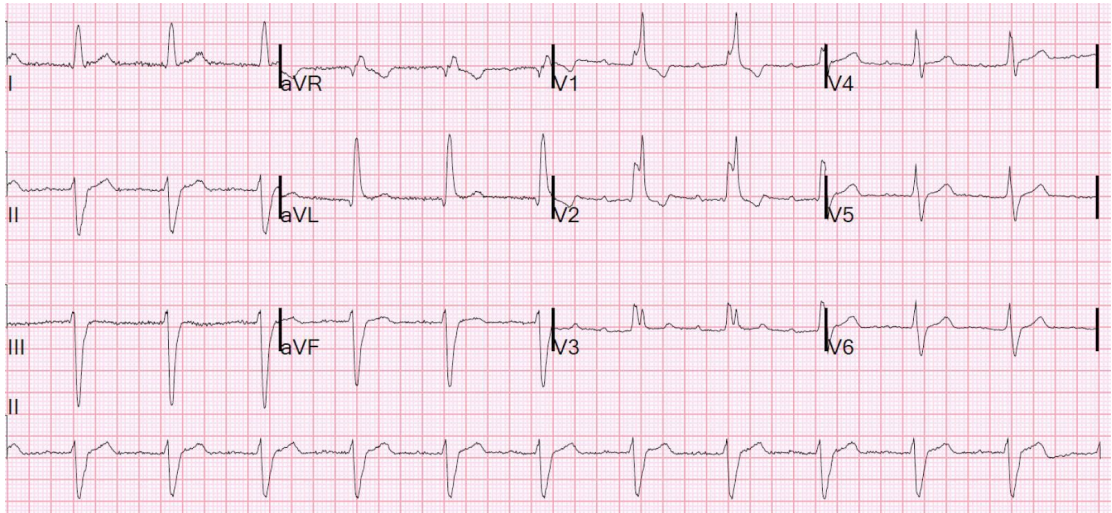
- a) Rt extensive EDH with midline shift and mass effect
- b) Lt extensive EDH with midline shift and mass effect
- c) Rt fronto-temporo-parietal SDH with mass effect and midline shift
- d) Lt fronto-temporo-parietal SDH with mass effect and midline shift



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20. 56/M was brought to the ED with an episode of exertional syncope this morning. As part of evaluation an ECG was taken.



Which option describes the above ecg the BEST

- a) CHB
- b) 1<sup>st</sup> degree heart block
- c) RBBB
- d) Trifasicular Block

21. The following drugs increase warfarin's action, except

- a) Metronidazole
- b) Amiodarone
- c) Disulfiram
- d) Phenobarbitone



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22. 60 /F presents to the Emergency Department with c/o generalised itching, swelling of lips and breathing difficulty after having dinner at a friends house. Correct dose of adrenaline in anaphylaxis is?

- a) 1mg i.v
- b) 0.3mg s/c
- c) 0.5mg i.m
- d) 0.1mg i.v

23. Action of hamstrings muscle is:

- a) Flexion
- b) Extension
- c) Medial rotation
- d) Lateral rotation

24. Vagus nerve pierces diaphragm at the level of

- a) T6
- b) T8
- c) T10
- d) T12

25. Atlantoaxial joint is a type of

- a) Pivot
- b) Hinge
- c) Saddle
- d) Condylloid

26. Which of the following is incorrect regarding anatomical snuff box:

- a) Medial border: extensor pollicis brevis
- b) Lateral border : abductor pollicis longus
- c) Floor: scaphoid
- d) Content: Radial artery



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27. Keisselbach's plexus is formed by all except:

- a) Superior labial artery
- b) Posterior ethmoidal artery
- c) Greater palatine artery
- d) Sphenopalatine artery

28. Bitemporal hemianopia is a visual defect due to lesion in :

- a) Optic nerve
- b) Optic chiasm
- c) Optic radiation
- d) Occipital lobe

29. In adult Advanced Life support ,what is the correct dose of Adrenaline to be used in Cardiac Arrest?

- a) 0.5mg iv Adrenaline
- b) 100 mcg of iv Adrenaline
- c) 0.5ml of 1:1000 solution of iv Adrenaline
- d) 10ml of 1:10000 solution of iv Adrenaline
- e) 1ml of 1:10000 solution of Iv Adrenaline

30. A 28 year old man presents to hospital having injured his leg playing football .X ray demonstrates fractures of both tibia and fibula .The patient demonstrates foot drop,but has normal eversion of the foot. Which of the following nerves is most likely injured?

- a) Tibial Nerve
- b) Common Fibular Nerve
- c) Deep fibular nerve
- d) Superficial Fibular Nerve
- e) Sural Nerve



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31. A patient has previously suffered an injury to his right forearm and wrist and has been left with a nerve lesion as a consequence. On examination he has a loss of abduction and opposition of Right thumb. Wrist and finger flexion are both intact but there is a noticeable wasting of thenar eminence. The Patient can make a fist adequately. There is loss of sensation over the radial three and half fingers. Which nerve lesion is present in this case?

- a) Radial Nerve in the spinal groove
- b) Ulnar nerve at the elbow
- c) Median nerve at the wrist
- d) Median nerve at the elbow
- e) Ulnar nerve at the wrist.

32. A 69 year old presents to Emergency department with a history of fever, a cough productive of thick green sputum and shortness of breath, 48 hours being discharged from hospital following a two week stay for treatment of sepsis. X-ray demonstrates a left lobe pneumonia. Which of the following pathogen is the most likely infectious agent ?

- a) Streptococcus Pneumonia
- b) Pseudomonas aeruginosae
- c) Mycoplasma Pneumoniae
- d) Haemophilous influenzae

33. A 73 year old patient who has recently been discharged from a prolonged stay in hospital including a stay in ITU, Where she was being treated for recurrent chest infections, presents to Emergency Department unwell with profuse diarrhoea, abdominal pain and distension. The patients abdominal X-ray shows a grossly dilated large bowel. What is most likely causative infectious agent ?

- a) Clostridium perfringens.
- b) Escherichia Coli
- c) Campylobacter Jejuni
- d) Clostridium Difficile.



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34. Atmospheric  $F_iO_2$  is

- a) 21%
- b) 100%
- c) 0.21
- d) 1

35. Tidal Volume is

- a) Amount of air inspired or Expired during normal respiration
- b) Amount of air present in lung after forceful inspiration
- c) Amount of air present in lung after forceful Expiration
- d) Amount of air present in lung after normal expiration

36. Which of the following statement regarding the Paediatric airway as compared with adult airway is true?

- a) A child has a smaller tongue relative to the size of the oral cavity
- b) An infants epiglottis is relatively short and thicker
- c) The vocal cord in infants have higher attachments
- d) In Children younger than 10 years, the narrowest portion of the airway is below the vocal cords

37. Which of the following is not a risk factor for SIDS (Sudden Infant Death Syndrome)

- a) Maternal age > 35 years
- b) Low birth weight
- c) Smoking and drug abuse by Mother
- d) None of the above

38. Castle intrinsic factor is connected with internal absorption of

- a) Pyridoxine
- b) Riboflavine
- c) Thiamine
- d) Cobalamine



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39. A steroid vitamin is

- a) A
- b) D
- c) E
- d) K

40. Which of the following should be avoided in Trauma?

- a) C-spine in line immobilization
- b) Chin lift
- c) Jaw thrust
- d) Backboard
- e) Head tilt

41. An 82 year old lady arrives after she tripped and fell in her kitchen at home. Her right leg is abducted and externally rotated. You suspect which of the following injuries?

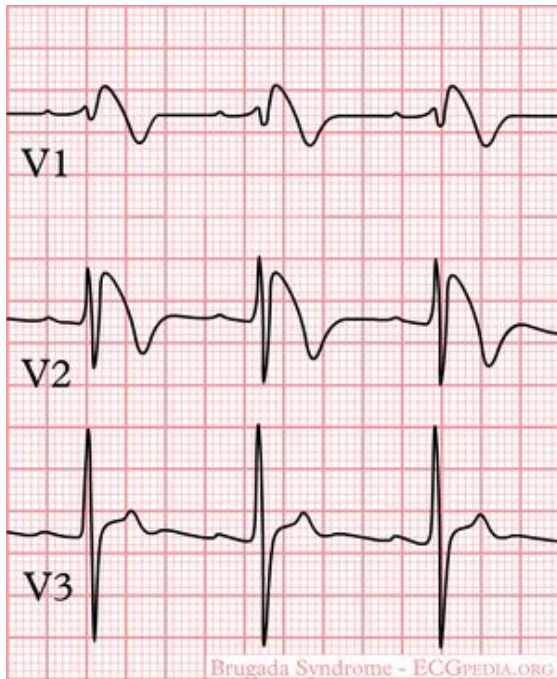
- a) Anterior dislocation
- b) Posterior dislocation
- c) Distal femur fracture
- d) Acetabular fracture



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42. Young athlete presented to Emergency department with history of Syncope. EKG shown below. What is your diagnosis



- a) WPW Syndrome
- b) Brugada syndrome
- c) Takotsubo cardiomyopathy
- d) Wellens syndrome

43. A 58-year-old female is brought to the ED by her family. They state that her words do not make sense, the right side of her face is drooping, and she is weak on the right side. On examination you note that the patient is awake and alert, has an expressive aphasia, right-sided facial droop, three-fifths right arm strength, four-fifths right leg strength, and decreased sensation to pin-prick on the right side. Which stroke syndrome is MOST likely?

- a) Anterior cerebral artery infarct
- b) Basilar artery occlusion
- c) Middle cerebral artery infarct
- d) Lacunar infarct
- e) Intracerebral haemorrhage





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44. Which of the following is LEAST consistent with Guillain-Barre syndrome?
- a) Ascending paralysis
  - b) Preceded by exposure to toxins
  - c) Sensory involvement
  - d) Intact reflexes
  - e) Resolution of symptoms in months
45. A 19-year-old man is brought to the ED by paramedics for a generalized tonic-clonic seizure. He was given rectal diazepam gel en route with no effect. His glucose level in the ambulance was 105 mg/dL. He has now been seizing for 10 minutes and an IV has been placed. What is the treatment of choice?
- a) Intravenous dextrose
  - b) Intravenous fosphenytoin
  - c) Intravenous lorazepam
  - d) Intravenous phenobarbital
  - e) Rectal diazepam
46. Which of the following is the earliest ECG findings in Acute MI ?
- a) Hyperacute T waves
  - b) ST elevation
  - c) ST depression
  - d) T wave inversion
47. What is the most common cause of lower GI Bleed in children
- a) Anal fissure
  - b) Hemorrhoids
  - c) Meckel's Diverticulum
  - d) Henoch schonlein purpura



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48. Which of the following parental agents is the initial preferred agent for blood pressure management in Acute aortic Dissection?
- a) Hydralazine
  - b) Enalapril
  - c) Labetolol
  - d) Diltiazem
49. Which is the most appropriate management for a patient with suspected small pox lesions?
- a) Acyclovir
  - b) Vaccination
  - c) Ganciclovir
  - d) Isolation
50. Which of the following is true regarding lipase and amylase in the setting of acute pancreatitis?
- a) Lipase is more specific than amylase.
  - b) Amylase is more sensitive than lipase.
  - c) Amylase peaks earlier and remains elevated for a longer period than lipase.
  - d) The degree of elevation of either amylase or lipase correlates with disease severity.
  - e) The amylase to lipase ratio may be useful in determining the etiology of pancreatitis



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**Answer Sheet for admission to MEM 2017 Batch under GWU**

Name:

Admit Card No.:

Total Wrong Answers:

Question No.	A	B	C	D	E
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**Darken on the correct Answer**

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