Asstt. Prof. (Med Edu) Comp. Exam 2024 चिकित्सा शिक्षा

Exam Date: 13/05/2025

पुस्तिका में पृष्ठों की संख्या : 24
Number of Pages in Booklet : 24

पुस्तिका में प्रश्नों की संख्या : 150
No. of Questions in Booklet : 150

MPA-25

प्रश्न-पुस्तिका संख्या व बारकोड/
Question Booklet No. & Barcode

813265

इस प्रश्न-पुस्तिका को तब तक न खोलें जब तक कहा न जाए। Do not open this Question Booklet until you are asked to do so.

Paper Code : 32

Sub : Paediatric Hepatology

समय : 02:30 घण्टे + 10 मिनट अतिरिक्त*
Time : 02:30 Hours + 10 Minutes Extra*

अधिकतम अंक : 150
Maximum Marks : 150

प्रश्न-पुस्तिका के पेपर की सील/पॉलिथीन बैग को खोलने पर प्रश्न-पत्र हल करने से पूर्व परीक्षार्थी यह सुनिश्चित कर लें कि :

- प्रश्न-पुस्तिका संख्या तथा ओ.एम.आर. उत्तर-पत्रक पर अंकित बारकोड संख्या समान हैं।
- प्रश्न-पुस्तिका एवं ओ.एम.आर. उत्तर-पत्रक के सभी पृष्ठ व सभी प्रश्न सही मुद्रित हैं। समस्त प्रश्न, जैसा कि ऊपर वर्णित है, उपलब्ध हैं तथा कोई भी पृष्ठ कम नहीं है/ मुद्रण त्रुटि नहीं है।

किसी भी प्रकार की विसंगति या दोषपूर्ण होने पर परीक्षार्थी वीक्षक से दूसरा प्रश्न-पत्र प्राप्त कर लें। यह सुनिश्चित करने की जिम्मेदारी अभ्यर्थी की होगी। परीक्षा प्रारम्भ होने के 5 मिनट पश्चात् ऐसे किसी दावे/आपत्ति पर कोई विचार नहीं किया जायेगा।

On opening the paper seal/polythene bag of the Question Booklet before attempting the question paper, the candidate should ensure that :

- **Question Booklet Number and Barcode Number of OMR Answer Sheet are same.**
- **All pages & Questions of Question Booklet and OMR Answer Sheet are properly printed. All questions as mentioned above are available and no page is missing/misprinted.**

If there is any discrepancy/defect, candidate must obtain another Question Booklet from Invigilator. Candidate himself shall be responsible for ensuring this. No claim/objection in this regard will be entertained after five minutes of start of examination.

परीक्षार्थियों के लिए निर्देश

1. प्रत्येक प्रश्न के लिये एक विकल्प भरना अनिवार्य है।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का मात्र **एक** ही उत्तर दीजिए। एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
4. **OMR** उत्तर-पत्रक इस प्रश्न-पुस्तिका के अन्दर रखा है। जब आपको प्रश्न-पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्रक निकाल कर ध्यान से केवल **नीले बॉल पॉइंट पेन** से विवरण भरें।
5. कृपया अपना रोल नम्बर ओ.एम.आर. उत्तर-पत्रक पर सावधानीपूर्वक सही भरें। गलत रोल नम्बर भरने पर परीक्षार्थी स्वयं उत्तरदायी होगा।
6. **ओ.एम.आर. उत्तर-पत्रक में करेक्शन पेन/व्हाईटनर/सफेदा का उपयोग निषिद्ध है।**
7. **प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा।** गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है।
8. **प्रत्येक प्रश्न के पाँच विकल्प दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4, 5 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले (बबल) को उत्तर-पत्रक पर नीले बॉल पॉइंट पेन से गहरा करना है।**
9. **यदि आप प्रश्न का उत्तर नहीं देना चाहते हैं तो उत्तर-पत्रक में पाँचवें (5) विकल्प को गहरा करें। यदि पाँच में से कोई भी गोला गहरा नहीं किया जाता है, तो ऐसे प्रश्न के लिये प्रश्न अंक का 1/3 भाग काटा जायेगा।**
10.* **प्रश्न-पत्र हल करने के उपरांत अभ्यर्थी अनिवार्य रूप से ओ.एम.आर. उत्तर-पत्रक जाँच लें कि समस्त प्रश्नों के लिये एक विकल्प (गोला) भर दिया गया है। इसके लिये ही निर्धारित समय से 10 मिनट का अतिरिक्त समय दिया गया है।**
11. **यदि अभ्यर्थी 10% से अधिक प्रश्नों में पाँच विकल्पों में से कोई भी विकल्प अंकित नहीं करता है तो उसको अयोग्य माना जायेगा।**
12. **मोबाइल फोन अथवा अन्य किसी इलेक्ट्रोनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।**

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए और **राजस्थान सार्वजनिक परीक्षा (भर्ती में अनुचित साधनों की रोकथाम अध्युपाय) अधिनियम, 2022 तथा अन्य प्रभावी कानून एवं आयोग के नियमों-प्रावधानों** के तहत कार्यवाही की जाएगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

INSTRUCTIONS FOR CANDIDATES

1. **It is mandatory to fill one option for each question.**
2. **All** questions carry equal marks.
3. Only **one** answer is to be given for each question. If more than one answers are marked, it would be treated as wrong answer.
4. The **OMR** Answer Sheet is inside this Question Booklet. When you are directed to open the Question Booklet, take out the Answer Sheet and fill in the particulars carefully with **Blue Ball Point Pen** only.
5. Please correctly fill your Roll Number in **OMR** Answer Sheet. Candidates will themselves be responsible for filling wrong Roll No.
6. **Use of Correction Pen/Whitener in the OMR Answer Sheet is stricly forbidden.**
7. **1/3 part of the mark(s) of each question will be deducted for each wrong answer.** A wrong answer means an incorrect answer or more than one answers for any question.
8. **Each question has five options marked as 1, 2, 3, 4, 5. You have to darken only one circle (bubble) indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.**
9. **If you are not attempting a question then you have to darken the circle '5'. If none of the five circles is darkened, one third (1/3) part of the marks of question shall be deducted.**
10.* **After solving question paper, candidate must ascertain that he/she has darkened one of the circles (bubbles) for each of the questions. Extra time of 10 minutes beyond scheduled time, is provided for this.**
11. **A candidate who has not darkened any of the five circles in more than 10% questions shall be disqualified.**
12. **Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt with as per rules.**

Warning : If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would be liable to be prosecuted under **Rajasthan Public Examination (Measures for Prevention of Unfair means in Recruitment) Act, 2022 & any other laws applicable and Commission's Rules-Regulations.** Commission may also debar him/her permanently from all future examinations.

उत्तर-पत्रक में दो प्रतियाँ हैं – मूल प्रति और कार्बन प्रति। परीक्षा समाप्ति पर परीक्षा कक्ष छोड़ने से पूर्व परीक्षार्थी उत्तर-पत्रक की दोनों प्रतियाँ वीक्षक को सौंपेंगे, परीक्षार्थी स्वयं कार्बन प्रति अलग नहीं करें। वीक्षक उत्तर-पत्रक की मूल प्रति को अपने पास जमा कर, कार्बन प्रति को मूल प्रति से कट लाइन से मोड़ कर सावधानीपूर्वक अलग कर परीक्षार्थी को सौंपेंगे, जिसे परीक्षार्थी अपने साथ ले जायेंगे। परीक्षार्थी को उत्तर-पत्रक की कार्बन प्रति चयन प्रक्रिया पूर्ण होने तक सुरक्षित रखनी होगी एवं आयोग द्वारा माँगे जाने पर प्रस्तुत करनी होगी।

1. Choose the incorrect statement amongst the following :
   (1) Patients with spontaneous bacterial peritonitis (SBP) may be completely asymptomatic.
   (2) *Bacterascites* is defined as a negative ascitic fluid culture result but an ascitic neutrophil count above $250/mm^3$.
   (3) Risk of bacterial infections in patients with cirrhosis is increased due to explained by multiple factors including alterations in the gut-liver axis, together with the immune dysfunction
   (4) Patients with a low ascitic fluid protein concentration and advanced cirrhosis or kidney failure are at high risk of developing a first episode of SBP.
   (5) Question not attempted

2. Which of the following is not a feature in urinary examination in hepatorenal syndrome ?
   (1) Urinary sodium concentration (mEq/L) : <10
   (2) Fractional excretion of sodium : >2
   (3) Urinary sediment : Normal
   (4) Response to volume expansion : Brief or no diuresis
   (5) Question not attempted

3. Which of the following statements is correct for immediate risk of oesophageal variceal bleed in a 10 years old child ?
   (1) Liver stiffness measurement (LSM) = 8
   (2) Splenic stiffness measurement (SSM) >25
   (3) SSM : LSM ratio < 8
   (4) Spleen size > 10 cm
   (5) Question not attempted

4. Following are true for non-cirrhotic portal fibrosis in children EXCEPT
   (1) Normal Hepatic venous pressure gradient
   (2) Hypersplenism can be present in upto 87%
   (3) 90% have GI bleed
   (4) 5 year survival 90-100%
   (5) Question not attempted

5. The most common cause of portal hypertension in children in India is
   (1) Indian childhood cirrhosis
   (2) Extrahepatic portal venous obstruction
   (3) Hepatic outflow tract obstruction
   (4) Hepatic tumor
   (5) Question not attempted

6. Which of the following is NOT a cause of neonatal liver failure ?
   A. Hemophagocytic lymphocytosis
   B. Tyrosinemia
   C. Gestational alloimmune liver disease
   D. Biliary atresia
   E. Alagille syndrome
   F. Mitochondrial hepatopathy
   G. Farnesoid X Receptor mutations
   (1) A, D, E, F (2) D, E
   (3) A, D, E, G (4) A, F, G
   (5) Question not attempted

7. Choose the correct statement amongst the following about hepato-renal syndrome (HRS) :
   (1) Differential diagnosis of renal dysfunction in cirrhotic patients includes prerenal azotemia, hepatorenal syndrome, and acute tubular necrosis
   (2) Administration of albumin during an episode of spontaneous bacterial peritonitis can reduce the risk of HRS
   (3) Vasopressor therapy (in addition to albumin) is the first line treatment of HRS management
   (4) All of these
   (5) Question not attempted

8. Which of the following is FALSE about Continuous Renal Replacement Therapy (CRRT) in acute liver failure ?
(1) CRRT reduces ammonia and hence controls cerebral edema.
(2) May improve survival with native liver.
(3) Early initiation of CRRT does not improve outcome.
(4) Intermittent renal replacement therapy has poor outcome compared to CRRT.
(5) Question not attempted

9. Which of the following is a feature of stage III hepatic encephalopathy (HE) as per West Haven classification ?
(1) Somnolence / stupor / combativeness
(2) Decebrate or decorticate posture
(3) Inattention to task/not behaving like self
(4) Inappropriate behaviour / decreased inhibitions
(5) Question not attempted

10. Which of the following statement is FALSE ?
(1) N-acetyl cysteine is beneficial in all non-acetaminophen induced pediatric acute liver failure.
(2) N-acetyl cysteine acts by enhancing hepatic and mitochondrial glutathione levels.
(3) In acetaminophen induced liver failure there is risk of irreversible liver injury if there is delay in administration of NAC beyond 24 hours of ingestion.
(4) Serum transaminases may reach at or above 10,000 IU/mL in paracetamol included acute liver failure.
(5) Question not attempted

11. Which of the following is FALSE about Pediatric acute liver failure ?
(1) Paracetamol toxicity causes Zone 1 necrosis.
(2) Human herpes virus 6, 7, Adenovirus, Parvovirus and Dengue can cause pediatric acute liver failure.
(3) Indeterminate acute liver failure is characterized by CD8 + CD103 + T-cell infiltrates in liver biopsy.
(4) Indeterminate acute liver failure may be associated with aplastic anemia.
(5) Question not attempted

12. Which of the following is/are FALSE in context of high volume plasma exchange in acute liver failure ?
A. Replacement of coagulation factors
B. Removal of Damage associated molecular patterns (DAMPs)
C. Improvement in Systemic inflammatory response syndrome
D. Removal of inflammatory macromolecules (von-Willebrand factor) leading to improvement in microcirculation
E. Continuous flow centrifugation is slower technique with more extracorporeal blood volume.
F. Membranous technique is better than centrifugation technique.
G. Improvement in native liver survival.
(1) A, C, E
(2) E, F
(3) A, C, E, F, G
(4) A, B, D, E, F, G
(5) Question not attempted

13. Management of raised intracranial pressure in Pediatric Acute Liver failure : What is incorrect ?
(1) Mannitol followed by hypertonic saline
(2) Euvolemia should be targeted using balanced crystalloids
(3) Hypertonic saline to maintain serum sodium upto 145-155 meq/L
(4) Hypertonic saline to maintain serum sodium upto 140-145 meq/L
(5) Question not attempted

14. Which of the following is not a component of King's score for paracetamol induced acute liver failure ?
(1) Arterial pH
(2) Hepatic encephalopathy
(3) Creatinine
(4) Bilirubin
(5) Question not attempted

15. The following is the list of etiologies of pediatric acute liver failure :
A. Gestational alloimmune liver disease
B. Autoimmune hepatitis
C. Acetaminophen
D. DGUOK mutations
E. Fatty acid oxidation defects
F. Wilson disease
G. Hepatitis-A virus
H. Herpes simplex virus
Which of the following statement is FALSE ?
(1) A, B, C, E, F, G, H have potential of reversibility with non-transplant strategies.
(2) B, C, F, H have specific therapies available.
(3) E needs dietary modification.
(4) A has liver transplant as the only option.
(5) Question not attempted

16. Which of the following genetic abnormalities is mostly/commonly associated with Alagille syndrome ?
(1) Deletion in the JAG1 gene
(2) Missense mutation in the NOTCH2 gene
(3) Duplication in the ALDOB gene
(4) Frameshift mutation in the UGT1A1 gene
(5) Question not attempted

17. Which of the following is FALSE about cerebral edema in acute liver failure ?
(1) Reverse jugular venous oxygen saturation <60% indicate decreased cerebral oxygen extraction due to cerebral hyperemia.
(2) Optic nerve sheath diameter >4.6 mm indicates indirect evidence of raised intracranial pressure.
(3) Pulsatility index on Transcranial Doppler increases with increase in intracranial pressure.
(4) Intracranial bolts have limited applicability in patients with acute liver failure.
(5) Question not attempted

18. Choose the incorrect statement amongst the following about Crigler-Najjar syndrome ?

(1) It is a form of congenital familial non-hemolytic jaundice.

(2) The response to phenobarbital can be used to differentiate between type I and II Crigler-Najjar syndrome.

(3) In type II, bile contains unconjugated bilirubin predominatly while in type I, bile contains small amounts of bilirubin conjugates and those present are predominantly bilirubin monoglucuronides.

(4) Phototherapy has been the primary modality to keep serum bilirubin levels under control.

(5) Question not attempted

19. Choose the incorrect statement amongst the following about infantile cholestasis :

(1) A serum conjugated (direct) bilirubin concentration of > 1 mg/dL with a total bilirubin of < 5 mg/dL, or over 20% of the total bilirubin concentration if the total is >5 mg/dL, is abnormal and requires evaluation.

(2) Hepatobiliary scintigraphy has high specificity but low sensitivity in confirming Biliary tract patency and excluding biliary atresia.

(3) Biliary atresia accounts for approximately 25-50% of infantile cholestasis cases.

(4) Common bile duct dilatation >4 mm is associated with congenital choledochal malformations.

(5) Question not attempted

20. What is FALSE about usage of Rifampicin for cholestasis ?

(1) It is a ligand for Farnesoid X receptor.

(2) It is a potent CYP3A4 inducer.

(3) It is effective in treatment of cholestatic pruritus.

(4) It decreases lysophosphatidic acid.

(5) Question not attempted

21. Choose the incorrect statement amongst the following about Alagille syndrome :

(1) Majority of the patients who are symptomatic with liver disease present in the first year of life.

(2) The hyperlipidemia in these patients is severely atherogenic.

(3) The multiple xanthomas are common sequelae of severe cholestasis.

(4) Bile duct paucity is not present in infancy in many patients.

(5) Question not attempted

22. Choose the incorrect statement amongst the following about ABCB11 deficiency ?

(1) Liver morphology shows a neonatal hepatitis with giant cell transformation of hepatocytes and lobular cholestasis.

(2) Underlying pathophysiology involves markedly diminished bile salt secretion and progressive cholestasis.

(3) There is a possibility of disease recurrence after liver transplantation.

(4) None of these

(5) Question not attempted

23. Which of the following statements is FALSE about liver histology in an infant with cholestasis ?
(1) Loose edematous portal expansion, bile ductular proliferation and bile plugs are suggestive of biliary atresia.
(2) Histological paucity in Alagille syndrome evolves over time and biopsy in early infancy poses diagnostic confusion.
(3) Presence of giant cell transformation and extramedullary hematopoiesis contribute to the diagnosis of biliary atresia.
(4) Periodic-acid Schiff positive diastase resistant globules in periportal hepatocytes suggest alpha-1 antitrypsin deficiency.
(5) Question not attempted

24. Which of the following is not a cause of bile duct paucity ?
(1) ABCB4 defects
(2) Congenital Infections
(3) Chronic hepatic allograft rejection
(4) Trisomy syndromes
(5) Question not attempted

25. Mutations in doublecortin domain-containing protein 2(DCDC2) all true EXCEPT
(1) Lead to neonatal sclerosing cholangitis
(2) Nephronophthisis, renal cysts, vascular malformations, and hearing loss are associated
(3) Rapidly progressive portal hypertension with variceal bleed is uncommon
(4) Response to endotherapy predicts long-term native liver survival
(5) Question not attempted

26. The following are the causes of high Gamma-glutamyl transpeptidase EXCEPT :
(1) Alagille syndrome
(2) Neonatal sclerosing cholangitis
(3) Bile acid synthetic defects
(4) Multidrug resistance Protein-3 mutations
(5) Question not attempted

27. All of the following genes have shown good genotype-phenotype correlation EXCEPT :
(1) ATP7B (2) ATP8B1
(3) ABCB11 (4) TJP2
(5) Question not attempted

28. Choose the correct statement amongst the following about intestinal failure-associated liver disease (IFALD) ?
(1) Intestinal failure associated liver disease can be considered to be a reversible liver injury, if treated in time.
(2) Primary treatment goal in IFALD is to ideally graduate a patient to enteral feedings and completely off parenteral nutrition.
(3) Administration of anti-inflammatory n-3 Fatty acids may potentially help mitigate liver injury.
(4) All of these
(5) Question not attempted

29. Which is the incorrect statement about the Indian mutations in TJP2 ?
(1) 88% of TJP2-C genotype likely to have early infantile cholestasis.
(2) TJP2A variants include patients with homozygous missense mutation.
(3) 60% TJP2-C genotype likely to have native liver survival at 10 years.
(4) Median age of TJP2-C genotype at liver transplantation is 2.5 years.
(5) Question not attempted

30. Choose the incorrect statement amongst the following abut treatment of Hepatitis B virus (HBV) infection ?
(1) For children with positive serum HBeAg and normal serum alanine aminotransferase levels there is no clear indication to use currently available treatments.
(2) In children with chronic HBV infection who will undergo immunosuppressive therapy antiviral treatment, if initiated, should be maintained for at least six months after stopping immunosuppressant therapy.
(3) HBsAg-carrier mothers who are HBeAg-positive and/or have a high viral load are the high-risk group of breakthrough HBV infection in the infants.
(4) None of these
(5) Question not attempted

31. Choose the incorrect statement amongst the following about Hepatitis E infection ?
(1) Genotype 3 is most prevalent and accounts for most cases in Asia.
(2) Compared to Hepatitis A, in India, the seroprevalence rate for Hepatitis E reaches only 30-40% among adults older than 25 years.
(3) Chronic HEV infection progressing to cirrhosis has been reported in immunosuppressed individuals.
(4) Pegylated interferon-alfa and ribavirin have been shown to treat chronic HEV infection.
(5) Question not attempted

32. Which of the following is FALSE about Hepatitis-C virus ?
(1) Hepatitis-C is a single strand RNA virus.
(2) Velpatasvir and Ledipasvir are NS5B Polymerase inhibitors.
(3) Sofosbuvir has pan-genotypic activity.
(4) Mother to child transmission is 5-7%.
(5) Question not attempted

33. Choose the incorrect statement amongst the following about neonatal hepatitis B virus (HBV) Infection :
(1) Perinatal transmission of HBV is more likely if the mother is positive for the HBV "e" antigen (HBeAg).
(2) Perinatally acquired HBV commonly presents with acute icteric hepatitis.
(3) For preterm infants who weigh <2 kg at birth born to HBsAg-positive mothers, the initial vaccine dose should not be counted in the required three doses to complete the immunization series.
(4) IgM anti-HBcAg is useful to establish acute or recent HBV infection.
(5) Question not attempted

34. When a newborn's mother test positive for Hepatitis B surface antigen (HBsAg), which intervention should be administered to the infant for optimal protection against Hepatitis B infection ?
(1) Administer the Hepatitis B vaccine at 6 weeks of age.
(2) Administer the Hepatitis B vaccine immediately after birth only.
(3) Administer the Hepatitis B immunoglobulin (HBIG) within 24 hr of birth.
(4) Administer the Hepatitis B vaccine immediately after birth only & Administer the Hepatitis B immunoglobulin (HBIG) within 24 hr of birth both at separate site.
(5) Question not attempted

35. Which of the following statement is FALSE about Visceral Larva migrans :
(1) It is caused by Toxocara canis.
(2) Treatment involves long term Metronidazole.
(3) Charcot Leyden crystals and eosinophilic granulomas are seen in the cytology.
(4) Multiple hypodense lesions may be seen on contrast enhanced computerized tomography.
(5) Question not attempted

36. Choose the incorrect statement amongst the following about biliary atresia :
(1) In patients with the syndromic or embryonic form, onset of cholestasis is within 2-3 weeks after birth with a jaundice-free interval
(2) Serum biomarker, matrix metalloproteinase-7 (MMP-7) has a high sensitivity and specificity >95% to discriminate biliary atresia from other causes of neonatal cholestasis
(3) Alagille syndrome patients may have hypoplastic extrahepatic biliary duct system and result in a false positive diagnosis of biliary atresia
(4) The most commonly encountered anatomic variant of biliary atresia is type 3 as per Japanese Society of Pediatric Surgeons classification
(5) Question not attempted

37. Which of the following is not an example of extrahepatic anomaly associated with Biliary atresia ?
(1) Portal Vein Anomalies (Preduodenal Portal vein etc)
(2) Immotile cilia syndrome
(3) Renal anomalies (Polycystic kidney etc)
(4) Hemi-hypertrophy syndrome
(5) Question not attempted

38. Infant Biliary Atresia Liver Fibrosis (iBALF) score: All True EXCEPT
(1) iBALF score > 5.27 strong indicator of poor outcomes after Kasai
(2) iBALF score > 3.27 strong indicator of poor outcomes after Kasai
(3) iBALF score predicts the outcomes of bile drainage surgery
(4) iBALF score predicts the need for primary LT
(5) Question not attempted

39. Von Meyenberg complexes (VMCs): All true EXCEPT
(1) VMCs arise from ductal plate malformations of smaller interlobular bile ducts
(2) VMCs present in around 1% of children
(3) VMCs may be associated with polycystic kidney disease
(4) VMCs associated, with Choledochal cysts
(5) Question not attempted

40. Which of the following syndromes is NOT associated with congenital hepatic fibrosis ?
(1) Joubert syndrome
(2) Cohen syndrome
(3) COACH syndrome
(4) Meckel Gruber syndrome
(5) Question not attempted

41. Which of the following is FALSE about Choledochal cysts in children ?
(1) Choledochele is dilatation of intraduodenal portion of bile duct
(2) Antenatal diagnosis is possible
(3) Type V is fusiform dilatation of bile duct
(4) Long term complications include malignancy, recurrent cholangitis, stricture, lithiasis.
(5) Question not attempted

42. What is the FALSE statement about hepatobiliary scan using ^{99}Tc-m Iminodiacetic acid scan ?
(1) Priming with Phenobarbitone 5 mg/kg daily for 5 days before HIDA is helpful.
(2) It is helpful in excluding biliary atresia in infants where the suspicion of biliary atresia is low.
(3) Biliary atresia infants have poor uptake and normal excretion of dye into intestine.
(4) Non-biliary atresia have impaired uptake of dye.
(5) Question not attempted

43. Which of the following factor is NOT associated with proposed pathogenetic mechanisms of Biliary atresia ?
(1) Maternal smoking
(2) Mutations in PKD1L1, ADD3, GPC1 and EFEMP1
(3) Reovirus type 3 and Rotavirus
(4) Biliatresone toxin
(5) Question not attempted

44. Diagnosis of IgG4 related disease ...what is correct ?
(1) Ratio of IgG4/IgG demonstrated a highest sensitivity and specificity
(2) IgG4 alone exhibited highest sensitivity and specificity
(3) Highest positive likelihood ratio and lowest negative likelihood ratio for IgG4/IgG
(4) Lowest positive likelihood ratio and highest negative likelihood ratio for IgG4
(5) Question not attempted

45. Seronegative-AIH (SN-AIH) Correct option
(1) Mean Prevalence of SN-AIH >50% in Children
(2) SN-AIH: autoantibody can become positive later in the course of the disease
(3) Clinical presentation of SN-AIH is not similar to seropositive AIH
(4) Response to therapy, and outcome of SN-AIH is worse than seropositive AIH
(5) Question not attempted

46. Which of the following has NOT been used as a diagnostic tool for Biliary atresia ?
(1) Immunological stains in histology
(2) Matrix Metalloproteinase-7
(3) Percutaneous cholecystocholangiogram
(4) Abdominal Sonography
(5) Question not attempted

47. Which of the following is INCORRECT match for the target antigens of the antibodies ?
(1) Liver kidney microsomal (LKM)-l: Cytochrome P450 2D6
(2) Liver cytosol (LC)-l: Filamentous actin
(3) Soluble liver antigen (SLA): Sep (O-phosphoserine) transfer RNA:Sec (Selenocysteine) transfer RNA synthase
(4) Liver kidney microsomal (LKM)-3: Uridine diphosphate (UDP) glucuronosyltransferase family 1
(5) Question not attempted

48. All of the following histological features are considered as typical features of autoimmune hepatitis EXCEPT
(1) Lymphoplasmacytic infiltrate
(2) Interface hepatitis
(3) Pseudorosettes
(4) Bile duct damage
(5) Question not attempted

49. All of the following are associated with risk of secondary sclerosing cholangitis (SSC) EXCEPT
(1) X-linked hyper-IgM / Agammaglobulinemia
(2) Langerhans cell histiocytosis
(3) Progressive familial intrahepatic cholestasis 2 (PFIC2/BSEP)
(4) Neonatal sclerosing cholangitis
(5) Question not attempted

50. Which statement is FALSE about autoimmune sclerosing cholangitis in children ?
(1) May occur concurrently with autoimmune hepatitis.
(2) May develop over course of autoimmune hepatitis.
(3) Less often has inflammatory bowel disease.
(4) Needs immunosuppression along with ursodeoxycholic acid.
(5) Question not attempted

51. Which of the following auto-antibodies indicates poor prognosis and risk of relapse in patients with autoimmune hepatitis ?
(1) Anti-soluble liver antigen antibody.
(2) Anti-nuclear antibody.
(3) Anti-smooth muscle antibody.
(4) Anti-liver kidney microsomal antibody.
(5) Question not attempted

52. Which of the following is NOT a finding on Computerized tomography in hepatic venous outflow tract obstruction ?
(1) Caudate lobe enlargement.
(2) Flip-flop appearance.
(3) Comma shaped (veno-venous) collaterals.
(4) Arterial nodular enhancement and venous washout in absence of hepatocellular carcinoma.
(5) Question not attempted

53. Which of the following is the procedure of choice for Extrahepatic portal venous obstruction ?
(1) Mesorex Bypass.
(2) Distal splenorenal shunt.
(3) Proximal splenorenal shunt with splenectomy.
(4) Repeated endotherapies.
(5) Question not attempted

54. Which of the following statements is FALSE about autoimmune acute liver failure ?
(1) IgG may be normal to low.
(2) Central perivenulitis is the commonest histological finding.
(3) More than 80% need Liver transplantation.
(4) Massive hepatic necrosis type 4 & 5 and lymphoid follicles are typical histological findings.
(5) Question not attempted

55. Acute Budd-Chiari syndrome....All true EXCEPT
(1) Non-opacification or filling defect within hepatic veins
(2) Increased enhancement in caudate & decreased enhancement in peripheral liver
(3) Caudate vein <1 mm
(4) Hepatic veins or Inferior vena cava narrowing or web
(5) Question not attempted

56. Congenital Portosystemic shunts: Suggestive clinical features are all EXCEPT
(1) Liver nodules
(2) Pulmonary vascular disease
(3) Encephalopathy
(4) Cardiac involvement
(5) Question not attempted

57. Extrahepatic portal vein obstruction is best defined by :
(1) Prehepatic cause of portal hypertension, usually presents in first decade of life, blocking 1st order of portal vein
(2) Presinusoidal cause of portal hypertension, usually presents in first decade of life, blocking 1st order of portal vein
(3) Prehepatic cause of portal hypertension, usually presents in second decade of life, blocking 1st order of portal vein
(4) Prehepatic cause of portal hypertension, usually presents in first decade of life, blocking 3rd or 4th order of portal vein
(5) Question not attempted

58. The first treatment of obese & overweight children :
(1) Life-style modification
(2) Low carbohydrate diet
(3) Low Fat Diet
(4) Pharmacologic agents
(5) Question not attempted

59. Exercise for paediatric NAFLD : Correct statement
(1) Only high intensity exercises in 4-6 sessions for a total 45 min/day is recommended.
(2) Moderate to high intensity exercises in 3-5 sessions for total of 60 min/day is recommended.
(3) Moderate intensity exercises only in 4-6 sessions for a total of 90 min/day is recommended.
(4) All of these
(5) Question not attempted

60. Choose the incorrect option amongst the following about Budd-Chiari syndrome ?
(1) Budd–Chiari syndrome involves obstruction from the level of the hepatic sinusoids to the junction of the inferior vena cava (IVC) with the right atrium
(2) It most often presents as chronic obstruction with hepatomegaly, ascites, abdominal distension and abdominal pain
(3) Classical radiological features include alterations in hepatic morphology and perfusion, from the classic fan-shaped enhancement of the caudate lobe and central liver to the presence of intra- and extrahepatic collateral vessels
(4) Serum aminotransferase and bilirubin levels are generally only mildly to moderately elevated in most of the patients
(5) Question not attempted

61. The best medication approved now to treat fatty liver disease in a 12-18 years old adolescent
(1) Vitamin E
(2) Urso-deoxy cholic acid
(3) Omega 3 & Omega 6 poly unsaturated fatty acids
(4) Glucagon like peptide-1 agonist
(5) Question not attempted

62. Non-alcoholic fatty liver disease activity score (NAS) includes all the following EXCEPT
(1) Hepatocellular ballooning
(2) Steatosis
(3) Fibrosis
(4) Lobular inflammation
(5) Question not attempted

63. Indication for Surgery or Endoscopic therapies in NAFLD
(1) Class 2 obesity c̄ Steatohepatitis ē DM type 2 or obstruct sleep apnoea, Hypertension
(2) Class 3 obesity with Steatohepatitis
(3) Class 2 obesity with Steatohepatitis ē Dyslipiderine and disease associated depression
(4) All of these with failed lifestyle modifications and pharmacotherapy trial
(5) Question not attempted

64. All of the following are part of Pediatric non-alcoholic fatty liver disease fibrosis index (PNFI) EXCEPT :
(1) Aspartate aminotransferase (AST)
(2) Age
(3) Waist circumference
(4) Triglycerides
(5) Question not attempted

65. Risk factors for fatty liver disease in children
(1) Excessive screen usage and lack of vigorous physical activity
(2) Intake of calorie dense processed foods in large portion
(3) PNPLA3 & TM6SF2 are the major genetic risk factor
(4) All of these
(5) Question not attempted

66. Fatty liver in Kwashiorkor is due to
(1) Decrease in carbohydrates
(2) Decrease in Protein substances
(3) Abnormal protein synthesis
(4) Reduced synthesis of lipoprotein carriers
(5) Question not attempted

67. Which of the following conditions is NOT associated with risk of Hepatocellular carcinoma ?
(1) Neurofibromatosis
(2) Down's syndrome
(3) Ataxia telangiectasia
(4) Alagille syndrome
(5) Question not attempted

68. Poor outcome associated with Hepatoblastoma : Incorrect statement
(1) PRETEXT IV
(2) Age > 5 years
(3) AFP 1000 – 1,00,000 ng/ml
(4) Low AFP
(5) Question not attempted

69. Which of the following is not a risk factor for Hepatoblastoma (HB) ?
(1) Beckwith-Wiedemann syndrome
(2) Tyrosinemia type 1
(3) Low birth weight and prematurity
(4) Li-Fraumeni syndrome
(5) Question not attempted

70. Which of the following life-style factors are NOT associated with development of Metabolic dysfunction associated steatotic liver disease (MASLD) in children ?
(1) Fructose intake in the form of sugar sweetened beverages.
(2) Whole grain and cereal fibre intake.
(3) Lack of moderate to vigorous physical activity.
(4) Higher pre-pregnancy maternal weight.
(5) Question not attempted

71. Which of the following match about the Glycogen storage disorders is WRONG ?
(1) Glycogen storage disease type 9: Phosphorylase kinase enzyme
(2) Glycogen storage disease type 1: Glucose-6-Phosphatase enzyme
(3) Glycogen storage disease type 4: Debrancher enzyme
(4) Glycogen storage disease type 6: Liver Phosphorylase enzyme
(5) Question not attempted

72. Following is incorrect about ATP7B gene :
(1) Located on 13q14.3
(2) Belongs to class 1B of P-type ATPase superfamily
(3) Synthesized in the Trans-Golgi network
(4) Has 20 introns and 21 exons
(5) Question not attempted

73. Diagnosis of Wilson disease : Incorrect statement
(1) Leipzig criteria 4/8 score at least
(2) Liver copper quantification > 250 micro gm/gm of liver tissue
(3) Exchangeable copper < micro gm/dL
(4) Genetic studies
(5) Question not attempted

74. Which of the following is not a benign hepatic neoplasm in children ?
(1) Hepatic adenoma
(2) Focal nodular hyperplasia
(3) Haemangioendothelioma
(4) Embryonal Rhabdomyosarcoma
(5) Question not attempted

75. One of the following is the most likely diagnosis in a 5 month old infant presenting with conjugated hyperbilirubinemia, hypoglycemia and absent urinary ketones
(1) Progressive familial intra hepatio cholestasis
(2) Dubin-Johnson type syndrome
(3) Fatty acid oxidation defect
(4) Cholesterol ester storage disorder
(5) Question not attempted

76. Choose the incorrect match between the clinical entity and its affected gene
(1) Low-Phospholipid-Associated Cholelithiasis : ABCB4
(2) Dubin-Johnson syndrome: ABCC2
(3) Rotor syndrome: OATP1B1 (SLCO1B1) / OATP1B3 (SLCO1B3)
(4) Sitosterolemia : MYO5B
(5) Question not attempted

77. Which of the following are manifestations of mitochondrial hepatopathies ?
(1) Renal tubular dysfunction (Fanconi syndrome)
(2) Pancytopenia, sideroblastic anemia
(3) Pancreatic insufficiency
(4) All of these
(5) Question not attempted

78. Family screening for Wilson disease – correct approach
(1) Sibling of confirmed Wilson → Haplotype or genetic analysis
(2) Offspring and sibling of confirmed Wilson → KF ring, ceruloplasmin 24-hour urinary copper
(3) Sibling of confirmed Wilson → KF ring, ceruloplasmin 24 hour urinary copper
(4) Offspring & sibling of confirmed Wilson → Genetic analysis
(5) Question not attempted

79. Choose the incorrect option amongst the following about urea cycle metabolism
(1) Urea cycle disorders (UCDs) lead to an inability to rid excess nitrogen from the body, resulting in accumulation of nitrogen species, namely ammonia and glutamine
(2) All UCDs are inherited in an X-linked manner, with the exception of ornithine transcarbamylase deficiency (OTCD)
(3) Glutamine is a surrogate marker of hyperammonemia.
(4) Arginase deficiency patients often present with progressive spasticity, rather than acute onset hyperammonemia.
(5) Question not attempted

80. Choose the incorrect option amongst the following about management of Wilson disease
(1) Low serum ceruloplasmin levels may occur with Kwashiorkor, severe copper deficiency, acute liver failure, the normal neonate, Menkes' syndrome and some heterozygotes for Wilson disease
(2) Immunological techniques for assessment of ceruloplasmin can give falsely (high) normal values
(3) Trientine toxicity includes sideroblastic anemia, nephrotoxicity, rare hepatic toxicity, and skin and mucosal lesions
(4) After atleast 5 years of continued chelation therapy, patients can be safely maintained of low copper diet without chelation.
(5) Question not attempted

81. Oildrop cataract is seen in _____ .
(1) Tyrosinemia
(2) Galactosemia
(3) Wilson disease
(4) Phenyl ketone urea
(5) Question not attempted

82. Choose the incorrect statement amongst the following, about congenital disorders of glycosylation (CDG) ?
(1) CDGs are characterized by defects in the synthesis and attachment of glycans to proteins and lipids.
(2) Many forms of CDG can be identified by transferrin glycoform analysis.
(3) Phosphomannomutase deficiency (PMM2-CDG) is the most common form of CDG.
(4) D-galactose therapy is the treatment of choice for Phosphomannose Isomerase Deficiency (MPI-CDG).
(5) Question not attempted

83. Choose the incorrect statement amongst the following about Hereditary Fructose Intolerance (HFI) ?
(1) Affected patients are generally healthy and symptom free so long as they do not ingest fructose or fructose-containing foods
(2) Symptoms can present even neonatal period if sucrose containing formulas are used for feeding
(3) Aversion to dietary "sweets" is seen almost one-fourths of all of the affected infants
(4) Absence of hepatomegaly is a specific feature for diagnosis of HFI
(5) Question not attempted

84. Which of the following is not a characteristic finding in urea cycle defects ?
(1) Respiratory alkalosis
(2) Hypoglycemia
(3) Hyperammonemia
(4) Metabolic acidosis
(5) Question not attempted

85. Pancreatic exocrine insufficiency, aplastic alae nasi, deafness, hypothyroidism, short stature, absent permanent teeth and genitourinary malformations are seen in :
(1) Pearson Marrow-Pancreas syndrome.
(2) Schwachman-Diamond syndrome.
(3) Meckel-Gruber syndrome.
(4) Johanson-Blizzard syndrome.
(5) Question not attempted

86. All of the following gene defects are associated with risk of pancreatitis, EXCEPT
(1) SPINK1 (2) CEL
(3) PKDH1 (4) CASR
(5) Question not attempted

87. All conditions are associated with hydrops of the gall bladder EXCEPT
(1) Leptospirosis
(2) Malaria
(3) Sickle cell crisis
(4) Ascariasis
(5) Question not attempted

88. The following is FALSE about causes of Gallstones in children :
(1) Cirrhotics have high solubilizing capability and reduced prevalence of gallstones than general population.
(2) Ascaris lumbricoides causes brown pigment gall stones.
(3) Obesity, ileal resection, jejunoileal bypass or small intestinal Crohn's cause cholesterol gall stones.
(4) Hemolytic states cause pigment gall stones.
(5) Question not attempted

89. Fatty Acid Oxidation Disorder. What is incorrect ?
(1) Medium chainage coenzyme A dehydrogenase deficiency 10% fatality by 6 years.
(2) Very long chainage coenzyme A dehydrogenase deficiency 10-20% identified with new born screening.
(3) Mitrochondrial trifunctional protein deficiency have low early mortality rate.
(4) Carnitine transporter deficiency are successfully treatable.
(5) Question not attempted

90. Inhalational anaesthetic agent with least hepatotoxic potential is :
(1) Halothane (2) Isoflurane
(3) Enflurane (4) Sevoflurane
(5) Question not attempted

91. What is the treatment modalities in Wilson disease ē decompensation ?
(1) Plasmapheresis only
(2) Zinc salts only
(3) Zinc + chelation + Plasmapheresis
(4) All of these
(5) Question not attempted

92. In acute pancreatitis, which statement is correct for estimation of serum levels of pancreatic enzymes ?
(1) Serum amylase levels rise within 6 to 12 hours of onset of acute pancreatitis and is cleared slowly from the blood (half-life, 96 hours).
(2) Diagnosis of acute pancreatitis requires at least a 5-fold elevation of serum amylase or lipase in the blood.
(3) The serum amylase may be normal or only minimally elevated in fatal pancreatitis.
(4) Serum lipase may have a greater sensitivity but lesser specificity for pancreatitis than amylase.
(5) Question not attempted

93. Which type of drug induced liver injury is indicated by an R-value more than 5 ?
(1) Cholestatic
(2) Mixed
(3) Hepatocellular
(4) None of these
(5) Question not attempted

94. The following are true about Vitamin-E EXCEPT :
(1) Severe deficiency can cause truncal ataxia, ophthalmoplegia, retinal dysfunction.
(2) Premature infants with vitamin-E deficiency can develop haemolytic anemia.
(3) Deficiency affects spinocerebellar tracts and posterior columns of the spinal cord.
(4) Vitamin-E is the least hydrophobic of all fat soluble vitamins and thus has least requirement for intraluminal bile acids for absorption.
(5) Question not attempted

95. Which of the following statement on nutritional assessment of children with chronic liver disease is INCORRECT ?
(1) Mid arm muscle area is a measure of sarcopenia.
(2) Total psoas muscle area on computerized tomography is a measure for sarcopenia.
(3) Triceps skin fold thickness is a measure of muscle mass.
(4) Weight for age and weight for height measures are not reflective of nutritional status in cirrhotics.
(5) Question not attempted

96. Which of the following drugs does NOT cause vanishing bile duct syndrome ?
(1) Chlorpromazine
(2) Flucloxacillin
(3) Isoniazid
(4) Trimethroprim-sulfamethaxazole
(5) Question not attempted

97. Hepatorenal syndrome (HRS) : Incorrect statement
(1) Reduced urine output is strongly linked to a worse prognosis
(2) Type 2 HRS is commonly associated with refractory ascites
(3) Type 1 has gradual decline of renal functions
(4) Low Effective arterial blood volume is the pathogenesis
(5) Question not attempted

98. Pediatric Hepatopulmonary syndrome (HPS) : Incorrect statement
(1) Prevalence of 13% and 40% in children with extra hepatic portal venous obstruction and cirrhosis respectively
(2) Prevalence of HPS is higher in Biliary atresia than other Chronic liver diseases
(3) HPS was classified as mild if PaO_2 between >80 mmHg, as per the ABG
(4) Liver Transplant is contra-indicated for all patients with Severe HPS
(5) Question not attempted

99. Neurotransmitters involved in development of hepatic encephalopathy due to chronic liver disease are all EXCEPT :
(1) Gamma-aminobutyric acid - Benzodiazepine system
(2) Manganese
(3) Renin-Angiotensin-Aldosterone pathway
(4) Circulating opioid peptides
(5) Question not attempted

100. Liver disease that affects the bone, endocrine, nervous system and skin
(1) Mitochondropathy
(2) Fatty acid oxidation defect
(3) Lysosomal disorders
(4) Wilson disease
(5) Question not attempted

101. Which of the following is FALSE about intrahepatic cholestasis of pregnancy ?
(1) There is no risk to the fetus.
(2) Pruritus starts usually in the third trimester.
(3) Serum bile acids are elevated.
(4) Serum alkaline phosphatase and transaminases levels are elevated.
(5) Question not attempted

102. Large Bowel Infectious Diarrhea Post LT.... what is not a common cause ?
(1) Clostridium (2) Shigella
(3) PTLD (4) CMV
(5) Question not attempted

103. A 5 year old child comes to the hospital with an altered mental status. The child is confused and drowsy. His INR is "5". Viral markers show acute hepatitis A infection. It is planned that he will undergo liver transplantation for acute liver failure. Which of the following occurs first in the sequential order of liver transplantation :
(1) Portal Vein anastomosis
(2) Venorenous bypass
(3) Hepatic artery anastomosis
(4) Bile duct anastomosis
(5) Question not attempted

104. Maternal HCV infection: Correct statement
(1) Chances of maternal to child transmission is 70%
(2) Chances of maternal to child transmission increases if maternal HBV infection also present
(3) Infants born should be tested for HCV RNA at 3-4 months of age
(4) Anti HCV antibodies test should be done in third trimester
(5) Question not attempted

105. What is not an Indication for LT in Biliary Atresia with unsuccessful Kasai Surgery ?
(1) End stage Liver disease
(2) Refractory variceal bleed
(3) Portal Vein >4 mm
(4) Hepatic Resistive index >1
(5) Question not attempted

106. Complications of LT commonest in pediatric age group
(1) Hepatic Artery Thrombosis
(2) Biliary Complications
(3) Antibody mediated Rejection
(4) Portal Vein Thrombosis
(5) Question not attempted

107. Good Response to steroid Pulse ...All True EXCEPT
(1) 2 out of 3 lab parameters (serum transaminases [AST/ALT], serum bilirubin, GGT) to < 2 x ULN within 2 weeks of start of treatment.
(2) Reduction in 50% of AST ≤ 48 hours of last methyl prednisolone pulse dose - best measure of treatment.
(3) Reduction in ALT usually lags behind AST.
(4) Reduction in AST usually lags behind ALT.
(5) Question not attempted

108. Management of T cell-Chronic rejection: All are true EXCEPT
(1) Switch to Tacrolimus
(2) Add Antimetabolites +/- mTOR inhibitors
(3) Differentiate from Denovo AIH / Recurrence of liver disease
(4) Steroid Pulse will always show response
(5) Question not attempted

109. All of the following are a component of the Child-Turcotte-Pugh scoring system, EXCEPT
(1) Serum bilirubin
(2) Ascites
(3) Serum creatinine
(4) Hepatic encephalopathy
(5) Question not attempted

110. All of the following are causes of early graft dysfunction (within 7 days) post liver transplantation EXCEPT :
(1) Primary non-function
(2) Hepatic artery thrombosis
(3) Biliary strictures
(4) Small for size syndrome
(5) Question not attempted

111. Most common indication for liver transplant in children is
(1) Viral hepatitis with fulminant hepatic failure
(2) Biliary atresia
(3) Metabolic liver disease
(4) Hepatic tumor
(5) Question not attempted

112. HCC in Tyrosinemia Patient's explant liver : Correct answer
(1) 10-25% (2) 80%
(3) 50-60% (4) <10%
(5) Question not attempted

113. All of the following are absolute contraindications for Liver transplantation EXCEPT
(1) Uncontrolled systemic sepsis.
(2) Progressive terminal extrahepatic disease.
(3) Hepatoblastoma with lung metastases.
(4) Irreversible severe neurological injury due to acute liver failure.
(5) Question not attempted

114. Which of the following are the treatment options for antibody mediated rejection ?
(1) Plasma exchange and intravenous immunoglobulin-G (IVIg).
(2) Increasing standard immunosuppression.
(3) Rituximab and Bortezomib.
(4) Basiliximab.
(5) Question not attempted

115. Which of the following statement is false regarding the acute rejection after liver transplantation ?

(1) The highest incidence of acute rejection is during the first few weeks following transplantation.

(2) The histologic pattern of acute T-cell mediated rejection commonly includes dense portal infiltration, diffuse C4d staining, bile duct inflammation/damage and venous endothelial inflammation.

(3) Antilymphocyte therapies are often the second line therapy in steroid resistant rejections.

(4) There is no standard recommended treatment for chronic rejection

(5) Question not attempted

116. What are the procedures that can be undertaken at the time of Transjugular liver biopsy ?

(1) Intraoperative portal pressure measurement

(2) Transhepatic percutaneous portal pressure measurement

(3) Hepatic venous pressure gradient (HVPG) measurement

(4) Transhepatic Porto systemic shunt

(5) Question not attempted

117. Recurrence of liver disease following liver transplantation is seen with all EXCEPT :

(1) Wilson disease - graft from heterozygous donor.

(2) Bile salt export pump deficiency.

(3) Autoimmune hepatitis.

(4) Primary sclerosing cholangitis.

(5) Question not attempted

118. Which of the following is one of the system used for classifying gastric varices ?

(1) Hashizume's classification

(2) Conn's classification

(3) Westaby classification

(4) Cale's classification

(5) Question not attempted

119. Which of the following is FALSE about complications due to endoscopic sclerotherapy (EST) for esophageal varices EXCEPT :

(1) Ulcer formation and rebleed

(2) Mediastinitis, Pleural effusion

(3) Stricture development is comparable with 3% polydochanol and 0.5% absolute alcohol

(4) Aspiration

(5) Question not attempted

120. Modified Seattle criteria is used for

(1) Liver Tumor staging

(2) NASH staging

(3) Veno occlusive disease diagnosis

(4) Liver injury staging

(5) Question not attempted

121. Which of the following is INCORRECT for Transient elastography of liver for measuring Liver stiffness ?

(1) Based on ultrasound vibrations of high amplitude and low frequency transversing the liver.

(2) Principle is that the wave propagates faster in a stiff liver as compared to soft liver.

(3) Values range between 0 to 75 kilopascals.

(4) Value above 25 kilopascals indicate clinically significant portal hypertension.

(5) Question not attempted

122. A 6 months old infant presented with jaundice, high coloured urine, pigmented stools, pruritus and systolic murmur in the axilla. What is the likely diagnosis ?

(1) Neonatal Sclerosing Cholangitis
(2) Bile salt export pump deficiency
(3) Galactosemia
(4) JAG1 or NOTCH2 gene mutations
(5) Question not attempted

123. A 3 year old girl presents to the clinic with recurrent episodes of hypoglycaemia and seizures. She has a history of developmental delay and failure to thrive. Laboratory investigations reveal a low serum glucose level, elevated serum lactate and ketone bodies and an increased anion gap. Further investigation shows a deficiency of the enzyme pyruvate carboxylate. What is the long term prognosis for this patient ?

(1) Normal life span and no long term sequelae
(2) Developmental delay without intellectual disability
(3) Early death due to metabolic crisis
(4) Mild neurological deficit
(5) Question not attempted

124. Which of the following suggests need for evaluation for liver transplantation in a child of 8 years with acute viral hepatitis A ?

(1) Appearance of Fever
(2) Appearance of Ascites on ultrasound
(3) Reduced Urine output
(4) Reduced Liver span on percussion
(5) Question not attempted

125. The following is a list of diagnostic tests

A. Liver histology
B. Ceruloplasmin
C. Hepatobiliary Iminodiacetic acid scan
D. Gamma-glutamyl transpeptidase
E. Urine for non-glucose reducing substances
F. IgM antibody against Hepatitis-A

Of these, which of the following test/tests are NOT required to evaluate an infant with cholestasis ?

(1) B, E & F
(2) B & F
(3) A, B, C & F
(4) Only B
(5) Question not attempted

126. Which statement is incorrect about the lobular structure of liver and regeneration ?

(1) Zone 1 is closest to the blood supply as it enters the lobule
(2) Zone 2 is closest to the blood supply in the lobule
(3) Zone 3 is closest where the blood is drained out
(4) Zone 2 hepatocytes proliferate to repopulate the damaged tissue after liver injury
(5) Question not attempted

127. Sarcopenia MELD score: Correct statement

(1) Is calculated by adding 8.35 to the MELD score
(2) Improving the prognostic value of the high MELD score
(3) Used to stratify patients awaiting Liver transplant
(4) All of these
(5) Question not attempted

128. Choose the incorrect statement amongst the following regarding bile formation and transport :
(1) Bile is a non-aqueous solution composed principally of bile acids, phospholipids, cholesterol, electrolytes, other metabolites and toxins.
(2) Bile acids are synthesized solely within hepatocytes from cholesterol precursor molecules.
(3) In humans, conjugated bile acids are efficiently taken up from the portal circulation primarily via the Na+/ taurocholate cotransporting polypeptide.
(4) Cholesterol is secreted via transporters encoded by ABCG5 and ABCG8.
(5) Question not attempted

129. Choose the incorrect statement amongst the following :
(1) Intrahepatic biliary development begins at around 6-7 weeks of gestation.
(2) JAGGED1-mediated NOTCH signaling is essential to intrahepatic bile duct development.
(3) Unlike mice, intrahepatic bile duct architecture in humans is complete at the birth.
(4) Ductal plate malformations (DPMs) are observed in patients with autosomal recessive polycystic kidney disease (ARPKD), congenital hepatic fibbrosis, autosomal dominant polycystic kidney disease (ADPKD), Caroli disease, Caroli syndrome, etc.
(5) Question not attempted

130. Choose the incorrect statement amongst the following regarding biliary transport ?
(1) "Primary" bile secreted by hepatocytes is modified by cholangiocytes, which modulate the fluidity and alkalinity of bile by secreting Cl^- and HCO_3 and by absorbing bile salts, glucose, and amino acids.
(2) In cases of bile acid retention, compensatory mechanisms include increased sinusoidal import and synthesis, reduced canalicular export, and increased metabolism pathways (hydroxylation and conjugation) to decrease bile acid toxicity.
(3) Farnesoid X receptor (FXR) is the centerpiece of regulatory control in cholestasis.
(4) Myrcludex is one of the bile acid hepatocyte re-entry inhibitors.
(5) Question not attempted

131. After birth the umbilical arteries in the infant degenerate and are referred as
(1) Round ligament of liver
(2) Ligamentum venosus
(3) Medial umbilical ligaments
(4) Ligamentum teres
(5) Question not attempted

132. Which of the following is the primary function of the liver in Carbohydrate metabolism ?
(1) Glycogen synthesis and storage
(2) Fatty acid breakdown
(3) Vitamin C production
(4) Vitamin D_3 production
(5) Question not attempted

133. Choose the incorrect statement amongst the following :
(1) Glucose is the primary fuel for the fetus and accounts for 50-80% of energy consumption.
(2) In fetus, glycogen stores rapidly accumulate near term, at which time the fetal liver contains an amount of glycogen two to three times higher than that in the adult liver.
(3) There is only limited role of gluconeogenesis in the fetal liver.
(4) Neonate is mostly dependent on hepatic gluconeogenesis to maintain blood sugar levels.
(5) Question not attempted

134. Choose the incorrect statement among the following :
(1) The right and left lobes of the liver are divided by a plane passing through the bed of the gallbladder and the notch of the inferior vena cava, called the *Cantlie line.*
(2) Most common system of hepatic sub-division is that proposed by Couinaud, which follows the distribution of portal and hepatic veins.
(3) The liver receives approximately 70% of its blood supply and 40% of its oxygen from the portal vein and 30% of its blood supply and 60% of its oxygen from the hepatic artery.
(4) In 10% of persons, the left and middle veins unite to enter the inferior vena cava as a single vein.
(5) Question not attempted

135. What marks the specification of Hepatoblasts during liver development ?
(1) Expression of transaminases
(2) Expression of albumin
(3) Expression of alpha / antitrypsin
(4) Expression of bilirubin
(5) Question not attempted

136. Which of the following is an INCORRECT match about Liver zonation ?
(1) Zone 1 – Periportal hepatocytes
(2) Zone 3 – Glycolysis, bile acid production
(3) Zone 1 – Xenobiotic metabolism, Glutamine synthesis
(4) Zone 1 – Abundance of oxygen
(5) Question not attempted

137. Choose the incorrect statement amongst the following about Gilbert syndrome (GS) ?
(1) It is characterized by mild unconjugated hyperbilirubinemia with otherwise normal liver function tests.
(2) There are no significant negative implications regarding morbidity or mortality with GS.
(3) Such patients have a lower risk of cardiovascular disease.
(4) Worldwide, the most common genetic finding is absence of one TA repeat in the promoter region or so-called TATA box (i.e., (TA)5TAA, rather than the normal (TA)6TAA) of UGT1A1.
(5) Question not attempted

138. Which of the following statement is FALSE about the anatomy of liver ?
(1) Caudate lobe lies between ligamentum venosum and inferior vena cava
(2) Ligamentum teres represents obliterated left umbilical vein.
(3) Gall bladder lies on the inferior surface of liver.
(4) Bare area of liver lies on anterior surface.
(5) Question not attempted

139. Which of the following proteins are not involved in Farnesoid X receptor (FXR) pathway ?

(1) Fibroblast growth factor (FGF)-19

(2) Small heterodimer partner (SHP)

(3) Hepatocyte nuclear factor 4-alpha

(4) Takeda G protein-coupled receptor (TGR)-5

(5) Question not attempted

140. Which of the following is FALSE with regard to vascular inflow of liver ?

(1) Hepatic artery buffer response indicates compensation of blood supply by portal vein for reduction of hepatic arterial inflow.

(2) Hepatic artery buffer response indicates compensation of blood supply by hepatic artery for reduction of portal venous inflow.

(3) Hepatic artery buffer response is capable of buffering upto 25-60% of reduced inflow to the liver.

(4) Liver predominantly receives its supply from portal vein (75-80%, de-oxygenated) and the remaining from hepatic artery (20-25%, oxygenated).

(5) Question not attempted

141. Which of the following are true regarding upper acute gastrointestinal bleeding EXCEPT

(1) Variceal bleeding is a common cause of upper gastrointestinal bleeding in Indian children

(2) Hematocrit is used to assess the severity of bleeding

(3) Packed red blood cells should be transfused to maintain hemoglobin > 12 g/dL

(4) NSAID are known to be a cause

(5) Question not attempted

142. A child brought by mother with history of massive hematemesis with history of drug intake previously with NSAIDS and on clinical examination massive splenomegaly was present. What is most likely cause of bleeding ?

(1) Duodenal ulcer

(2) Drug induced gastritis

(3) Oesophageal varices

(4) Peptic ulcer

(5) Question not attempted

143. Which of the following statements about imaging in Pediatric liver disorders is FALSE ?

(1) Hypoattenuation of pancreas on T2 magnetic resonance imaging in gestational alloimmime liver disease.

(2) Hypoattenuation in T2 magnetic resonance imaging in midbrain is suggestive of Copper deposition in Wilson disease.

(3) Patchy hepatic enhancement due to uneven portal perfusion is seen in Hepatic venous outflow tract obstruction / Budd-Chiari syndrome.

(4) Liver vascular malformations are seen in 40-70% of patients with Hereditary hemorrhagic telangiectasia.

(5) Question not attempted

144. Which of the following is NOT a cause of high serum ascites albumin gradient ?
(1) Budd-Chiari syndrome
(2) Cirrhosis
(3) Myxedema
(4) Nephrotic syndrome
(5) Question not attempted

145. Which of the following is INCORRECT for hepatopulmonary syndrome ?
(1) It can develop in the absence of cirrhosis.
(2) Diagnosis requires elevated age-appropriate alveolar arterial oxygen difference with or without hypoxemia due to intrapulmonary vasodilatation.
(3) Phosphodiesterase inhibitors may help in improving oxygenation.
(4) Intrapulmonary shunting is documented by contrast echocardiography using agitated saline.
(5) Question not attempted

146. An abrupt (<48 hours) change in which of the following parameters is considered acute kidney injury ?
(1) Increase in serum creatinine by ≥ 0.3 mg/dl
(2) Reduction of urine output to < 0.5 ml/kg/hour over 6 hours
(3) Decrease in estimated creatinine clearance by 50%
(4) Any of these
(5) Question not attempted

147. All are causes of Intrahepatic portal hypertension EXCEPT
(1) Glycogen storage disease Type IV
(2) Congenital Hepatic fibrosis
(3) Sclerosing cholangitis
(4) Splenic vein thrombosis
(5) Question not attempted

148. Which of the following is FALSE about spontaneous bacterial peritonitis ?
(1) Diagnosis is based on ascitic neutrophil count > 500/mm^3.
(2) Bacterascites indicate culture positivity in the absence of elevated ascitic neutrophil count.
(3) Antibiotic Prophylaxis is indicated if ascitic fluid protein is <1.5g/dL
(4) Antibiotics along with albumin administration prevents development of acute kidney injury.
(5) Question not attempted

149. Options available for refractory ascites include all of the following EXCEPT :
(1) The Alfapump system
(2) Long-term administration of intravenous albumin
(3) Selective angiotensin receptor antagonists
(4) Midodrine
(5) Question not attempted

150. Which of the following is INCORRECT about pathogenesis of portal hypertension in cirrhosis ?
(1) Increased hepatic resistance is 30% due to architectural distortion and 70% due to increased hepatic vascular tone.
(2) Pressure depends on flow and resistance.
(3) Increased portal flow is contributed by Nitric oxide, carbon mono-oxide and endocannabinoids.
(4) Hyperdynamic circulation is caused by reduced effective circulatory volume, increased beta-adrenergic signalling, increased heart rate and cardiac output.
(5) Question not attempted

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