

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

825993

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 : 53



Sub : Hepato-Pancreato-Biliary

समय : 02:30 घण्टे + 10 मिनट अतिरिक्त*

Surgery

अधिकतम अंक : 150

Time : 02:30 Hours + 10 Minutes Extra*

Maximum Marks : 150

प्रश्न-पुस्तिका के पेपर की सील/पोलिथीन 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/व्हाइटनर/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 उपरान्त 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 इलेक्ट्रॉनिक 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 अध्यापक) 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 strictly 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. Which of the following is the most common site of origin in Gall bladder cancer ?
 (1) Fundus (2) Body
 (3) Neck (4) Cystic duct
 (5) Question not attempted
2. Which of the following is not true regarding surgery for incidental carcinoma gall bladder ?
 (1) Routine port-site resection is not considered standard of care.
 (2) Bile duct resection is not routinely indicated.
 (3) Staging laparoscopy is indicated in all patients to avoid non-therapeutic laparotomy.
 (4) Parenchymal sparing wedge resection to achieve R0 resection has equivalent oncological efficacy to anatomical segmental resection.
 (5) Question not attempted
3. **Assertion (A) :** Both CEA and CA 19.9 may be used to monitor for recurrence of Carcinoma Gall bladder.
Reason (R) : Both CEA and CA 19.9 may be elevated in patients with Gall bladder cancer.
 (1) Both (A) and (R) are individually true and (R) is the correct explanation of (A).
 (2) Both (A) and (R) are individually true but (R) is not the correct explanation of (A).
 (3) (A) is true but (R) is false.
 (4) Both (A) and (R) are false.
 (5) Question not attempted
4. How many lymph nodes need to be resected to accurately stage patient with gall bladder cancer ?
 (1) 3 (2) 4
 (3) 5 (4) 6
 (5) Question not attempted
5. Which of the following is not true regarding acute cholecystitis ?
 (1) Positive bile cultures are found in 20% of patients.
 (2) Fundus of the gall bladder is the most common location for ischaemic necrosis of gall bladder.
 (3) Gall bladder is not visualized on hepatobiliary scintigraphy.
 (4) Computed tomography is better in the early course, when findings may be subtle on ultrasound.
 (5) Question not attempted
6. As per the Strasberg classification of biliary injury, all of the following may present with bill leak, except
 (1) Strasberg type A
 (2) Strasberg type B
 (3) Strasberg type C
 (4) Strasberg type D
 (5) Question not attempted
7. Most common presentation of intrahepatic cholangiocarcinoma is
 (1) Abdominal pain
 (2) Painless progressive Jaundice
 (3) Pruritus
 (4) Weight loss
 (5) Question not attempted
8. Which of the following is the most common pathologic subtype of intrahepatic cholangiocarcinoma ?
 (1) Mass forming type
 (2) Periductal infiltrating type
 (3) Intraductal growth type
 (4) Mixed growth type
 (5) Question not attempted

9. In T2 tumors of gall bladder adenocarcinoma, associated lymph node involvement is seen in
- (1) 12% (2) 31%
 - (3) 45% (4) 61%
 - (5) Question not attempted
10. **Assertion (A) :** Porcelain gall bladder is associated with increased risk of carcinoma gall bladder.
- Reason (R) :** Complete calcification of the gall bladder wall has lower risk as compared with selective calcification.
- (1) Both (A) and (R) are individually true and (R) is the correct explanation of (A).
 - (2) Both (A) and (R) are individually true but (R) is not the correct explanation of (A).
 - (3) (A) is true but (R) is false.
 - (4) (A) is false but (R) is true.
 - (5) Question not attempted
11. All of the following lymph nodes should be removed as a part of lymph node dissection during extended cholecystectomy for carcinoma gall bladder, except
- (1) Lymph nodes in Gastrohepatic ligament
 - (2) Lymph nodes in hepato-duodenal ligament
 - (3) Lymph nodes in aortocaval region
 - (4) Lymph nodes in Retroduodenal ligament
 - (5) Question not attempted
12. Which of the following is not true regarding Autoimmune Pancreatitis (AIP) ?
- (1) Diffuse enlargement of pancreas is seen.
 - (2) IgGs levels are often elevated.
 - (3) Poorly responds to corticosteroid treatment.
 - (4) Segmental, diffuse or irregular narrowing of main pancreatic duct is seen
 - (5) Question not attempted
13. Bedside Index for Severity of Acute Pancreatitis (BISAP) score includes all of the following, except
- (1) Blood urea nitrogen
 - (2) Impaired mental status
 - (3) Serum amylase levels
 - (4) Pleural effusion
 - (5) Question not attempted
14. Which of the following is not true regarding pseudocysts in chronic pancreatitis ?
- (1) Spontaneous regression occurs in upto 50% of patients.
 - (2) Ductal connection can be found in 50% of patients.
 - (3) Endoscopic pseudocyst drainage has 80% technical success rate.
 - (4) Pseudocyst develop as late complication of chronic pancreatitis in 20-40% of patients.
 - (5) Question not attempted
15. Which of the following is not true regarding annular pancreas in adults ?
- (1) Upto two-thirds of cases in adults remain asymptomatic.
 - (2) Non-bilious vomiting is the most common symptom.
 - (3) Presence of obstructive jaundice requires workup to rule out underlying malignancy.
 - (4) Some patients may present with pancreatitis.
 - (5) Question not attempted

16. All of the following are features of Solid Pseudopapillary Neoplasm of pancreas (SPN), except
- (1) Typically occurs in young females
 - (2) Metastases to liver or peritoneum occurs in less than 15% of patients.
 - (3) Tumor cells show immuno-reactivity for β -catenin
 - (4) Tumor cells express pancreatic enzymes (trypsin & chymotrypsin)
 - (5) Question not attempted
17. All of the following are autosomal dominant genetic disorder associated with familial pancreatic cancer, except
- (1) Hereditary pancreatitis
 - (2) Lynch syndrome
 - (3) Ataxia Telangiectasia
 - (4) Peutz-Jegher syndrome
 - (5) Question not attempted
18. Most common site of primary carcinoma for metastatic spread to pancreas is
- (1) Renal cell carcinoma
 - (2) Colorectal carcinoma
 - (3) Melanoma
 - (4) Lung cancer
 - (5) Question not attempted
19. Which of the following is not true regarding Mucinous Cystic Neoplasm (MCN) of pancreas ?
- (1) Occurs almost exclusively in women.
 - (2) Majority are located in the head of pancreas.
 - (3) Cyst fluid shows elevated CEA levels.
 - (4) Do not communicate with pancreatic duct.
 - (5) Question not attempted
20. Which of the following statements is not true regarding peptide receptor radionuclide therapy (PRRT) ?
- (1) SSSTR expression on functional imaging is an important predictor of response to PRRT.
 - (2) Gamma-emitting Indium-111 has long particle range and strong therapeutic effect.
 - (3) Lutetium 177 is a beta-emitting radionuclide.
 - (4) Myelosuppression is the most notable toxicity of PRRT.
 - (5) Question not attempted
21. All of the following investigations are useful in the diagnosis of chronic pancreatitis, except
- (1) Computed Tomography (CT)
 - (2) Magnetic Resonance Pancreaticography (MRP)
 - (3) Endoscopic Retrograde Pancreaticography (ERP)
 - (4) Endoscopic Ultrasound (EUS)
 - (5) Question not attempted
22. Which of the following is not true regarding Gastrinoma ?
- (1) Sporadic tumors are usually solitary.
 - (2) Majority are considered benign in nature.
 - (3) Pancreatic tumors are often associated with liver metastases.
 - (4) Frequently express both secretin and glucagon receptors.
 - (5) Question not attempted

23. The classic 4 D's in Glucagonoma include all of the following, except
- (1) Dermatitis
 - (2) Deep vein thrombosis
 - (3) Depression
 - (4) Diarrhoea
 - (5) Question not attempted
24. The landmark 'PANTER' trial compared the following treatment approaches for acute pancreatitis :
- (1) Percutaneous and endoscopic drainage
 - (2) Minimally invasive step-up approach & open pancreatectomy
 - (3) Retroperitoneal drainage and transgastric drainage
 - (4) Video-assisted retroperitoneal debridement and endoscopic drainage
 - (5) Question not attempted
25. As per the revised Atlanta classification, a collection occurring during first four week of acute pancreatitis that contains fluid as well as necroses is called
- (1) Acute peripancreatic fluid collection
 - (2) Acute pseudocyst
 - (3) Acute necrotic collection
 - (4) Acute organizing necrosis
 - (5) Question not attempted
26. Which of the following is next most common indication for surgery in chronic pancreatitis after intractable pain ?
- (1) Bile duct stenosis
 - (2) Suspicion of Malignancy
 - (3) Pseudocyst
 - (4) Bleeding
 - (5) Question not attempted
27. Calculate the CT severity index of a patient who had single phlegmon and pancreatic necrosis of < 30%.
- (1) 5
 - (2) 3
 - (3) 7
 - (4) 6
 - (5) Question not attempted
28. Which of the following antibiotic is considered as the first line option for the treatment of infected pancreatic necrosis ?
- (1) Quinolones
 - (2) Third generation cephalosporins
 - (3) Cartiapeneon
 - (4) Piperacillin
 - (5) Question not attempted
29. Cyst fluid analysis in intraductal papillary mucinous neoplasm (IPMN) shows all of the following, except
- (1) Scant glycogen rich cells with positive PAS stain
 - (2) Positive mucin stain
 - (3) High amylase
 - (4) High CEA levels
 - (5) Question not attempted
30. All of the following are worrisome feature of intraductal papillary mucinous neoplasm (IPMN), except :
- (1) Pancreatic duct 5 – 9 mm
 - (2) Lymphadenopathy
 - (3) Jaundice
 - (4) Enhancing mural nodules < 5 mm
 - (5) Question not attempted
31. All of the following are pre-requisites for performing a segmental pancreatectomy, except
- (1) Lesion < 5 cm
 - (2) Proximal pancreas stump > 5 cm
 - (3) Benign or low grade malignant tumor
 - (4) Location in neck of pancreas
 - (5) Question not attempted

32. Which of the following is not correct ?
- (1) Normal portal vein pressure : 5 to 10 mm Hg
 - (2) Extrahepatic portal venous obstruction : HVPg > 20 mm Hg
 - (3) Risk of variceal development : HVPg > 10 mm Hg
 - (4) Risk of variceal bleeding : HVPg > 12 mm Hg
 - (5) Question not attempted
- HVPg – Hepatic Venous Pressure Gradient
33. All of the following are true regarding non-cirrhotic portal fibrosis (NCPF), except
- (1) Onset in first decade of life
 - (2) Pre-sinusoidal block
 - (3) Massive splenomegaly
 - (4) Dilated portal vein
 - (5) Question not attempted
34. Which of the following is most commonly associated with portal biliopathy ?
- (1) Alcoholic cirrhosis
 - (2) Extrahepatic portal venous obstruction (EHPVO)
 - (3) Schistosomiasis
 - (4) Budd-Chiari syndrome
 - (5) Question not attempted
35. All of the following are absolute contraindications to transhepatic portosystemic shunt placement, except
- (1) Refractory hepatic encephalopathy
 - (2) Severe heart failure
 - (3) Severe pulmonary hypertension
 - (4) Coagulopathy
 - (5) Question not attempted
36. Rather than routine Percutaneous Catheter Drainage (PCD), percutaneous needle aspiration alone is usually sufficient in all of the following situations in the management of pyogenic liver abscess, except
- (1) Small size
 - (2) Non-viscous content
 - (3) Uniloculated lesion
 - (4) Communication with the biliary tree
 - (5) Question not attempted
37. The need for aspiration of an amoebic liver abscess is predicted by all of the following, except
- (1) Age > 55 yrs
 - (2) Positive amoebic serology
 - (3) Size of 6 cm
 - (4) Failure of 7 days of medical therapy
 - (5) Question not attempted
38. Which of the following is not a commonly utilized therapeutic option in patients with Extrahepatic portal venous obstruction related portal hypertension ?
- (1) Proximal Splenorenal Shunt (PSRS)
 - (2) Meso-Rex bypass
 - (3) Meso caval shunt
 - (4) Trans-jugular intrahepatic portosystemic shunt (TIPS)
 - (5) Question not attempted

39. All of the following are good prognostic factors for colorectal liver metastases, except
- (1) Size = 4 cm
 - (2) Node negative primary
 - (3) Right sided primary
 - (4) CEA level of 20 hg/ml
 - (5) Question not attempted
40. The albumin-bilirubin (ALBI) score can be used to better predict the risk of post-hepatectomy liver failure in which of the following group of patient?
- (1) Patients with child pugh A cirrhosis
 - (2) Patients with child pugh B cirrhosis
 - (3) Patients with MELD Score > 20
 - (4) Patients with MELD Score between 14 to 20
 - (5) Question not attempted
41. Presence of which of the following antibodies in serum suggests immunity against viral associated liver disease?
- (1) Anti HBe Ab
 - (2) Anti HBc Ab
 - (3) Anti - HCV
 - (4) Anti - HAV IgG Ab
 - (5) Question not attempted
42. Post shunt encephalopathy is least likely to occur in which of the following situations?
- (1) Distal splenorenal shunt in a patient with alcoholic cirrhosis
 - (2) Portacaval shunt in a patient with Budd-Chiari syndrome
 - (3) Proximal splenorenal shunt in a patient with schistosomiasis
 - (4) Proximal splenorenal shunt in a patient with extrahepatic portal venous obstruction (EHPVO)
 - (5) Question not attempted
43. Which of the following serum markers is specifically increased in hepatic disease?
- (1) Alkaline Phosphatase (ALP)
 - (2) γ - Glutamyl Transferase (GGT)
 - (3) Aspartate aminotransferase (AST)
 - (4) 5 - Nucleotidase
 - (5) Question not attempted
44. Which of the following is not true regarding multiple liver cell adenomas?
- (1) Presence of more than 10 liver cell adenomas is termed as liver adenomatosis.
 - (2) Multiple adenomas are seen in 12-30% of cases.
 - (3) They show higher female preponderance as compared to solitary adenomas.
 - (4) They are not associated with the use of oral contraceptives.
 - (5) Question not attempted
45. Percutaneous treatment of hydatid cyst by PAIR (Puncture, Aspiration, Injection and Re-aspiration) is most useful in which of the following types of hydatid cysts?
- (1) WHO type CE1 and CE3a
 - (2) WHO type CE1 and CE2
 - (3) WHO type CE1 and CE3b
 - (4) WHO type CE2 and CE3a
 - (5) Question not attempted
46. All of the following are true regarding Fibrolamellar hepatocellular carcinoma, except
- (1) Male : Female = 1:1
 - (2) Hepatitis B positivity = 50%
 - (3) Elevated Neutrotenin levels
 - (4) Alpha fetoprotein positivity = 5%
 - (5) Question not attempted

47. Which of the following is not true regarding hepatoblastomas ?

- (1) They are associated with markedly elevated alpha-fetoprotein (AFP) levels.
- (2) Almost all cases occur during first 3 years of life.
- (3) A large majority show genetic alterations of the WNT/ β -catenin signaling pathway.
- (4) Multiple tumors are commonly encountered.
- (5) Question not attempted

48. Most common indication for ALPPS (Associating liver partition and portal vein ligation for staged hepatectomy) procedure is

- (1) Hilar Cholangiocarcinoma
- (2) Neuroendocrine tumor liver metastases
- (3) Colorectal liver metastases
- (4) Hepatocellular carcinoma
- (5) Question not attempted

49. **Assertion A :** Trans-arterial chemoembolization with Gelatin sponge is not associated with significant hepatic parenchymal injury.

Reason R : The large particle size of Gelatin sponge precludes significant distal small vessel embolization.

- (1) Both A and R are individually true and R is the correct explanation of A.
- (2) Both A and R are individually true but R is not the correct explanation of A.
- (3) A is true but R is false.
- (4) A is false but R is true.
- (5) Question not attempted

50. The liver tunnel procedure may include resection of all of the following structures, except

- (1) Segment I
- (2) Middle hepatic vein (MHV)
- (3) Segment IV superior
- (4) Segment IV inferior
- (5) Question not attempted

51. **Assertion A :** The incidence of gall stones in patients with cirrhosis is twice that of general population.

Reason R : Cirrhosis is associated with increased intravascular hemolysis and decreased gall bladder motility and emptying.

- (1) Both A and R are individually true and R is the correct explanation of A.
- (2) Both A and R are individually true but R is not the correct explanation of A.
- (3) A is true but R is false.
- (4) A is false but R is true.
- (5) Question not attempted

52. As compared to non-cirrhotic patients, laparoscopic cholecystectomy in cirrhotic patients is associated with increased risk of all of the following, except

- (1) Intra-operative bleeding
- (2) Wound infection
- (3) Open - conversion
- (4) Post-operative morbidity
- (5) Question not attempted

53. Which of the following is not true regarding the no-touch technique for Radiofrequency Ablation (RFA) ?

- (1) Uses multiple electrodes
- (2) Uses monopolar mode
- (3) Electrodes are inserted just beyond the tumor margin
- (4) Useful to treat tumors in sub-capsular location
- (5) Question not attempted

54. Which of the following modalities is/are useful for primary prophylaxis of esophageal varices in adults with cirrhosis ?
- Non-selective β -blockers
 - Endoscopic variceal ligation
 - Trans-jugular intrahepatic portosystemic shunt (TIPS)
 - Surgical shunt procedure
- (1) a only (2) a and b
 - (3) a, b and c (4) a, b, c and d
 - (5) Question not attempted
55. Which of the following drugs is most commonly used for hepatic artery infusion (HAI) ?
- (1) 5-Fluorouracil
 - (2) Oxaliplatin
 - (3) Irinotecan
 - (4) Floxuridine
 - (5) Question not attempted
56. Which of the following is not true regarding trauma in cirrhotic patients ?
- (1) Falls are the most common cause of injury.
 - (2) Risk of death in child's C patients is around 45%.
 - (3) Non-operative management of splenic injury is often successful.
 - (4) Risk of death is much higher in patients who undergo laparotomy as compared to those who avoid laparotomy.
 - (5) Question not attempted
57. The WHO Informal Working Group on Echinococcosis (WHO-IWGE) recommends which of the following scolicidal agent for surgery ?
- (1) 95% alcohol
 - (2) 10% Betadine
 - (3) 20% Hypertonic saline
 - (4) 1% Formalin
 - (5) Question not attempted
58. Which of the following is not true regarding the operative management of hepatic trauma ?
- (1) Perihepatic packing is the preferred technique for high grade injuries.
 - (2) Pringle maneuver should be performed if packing fails to control bleeding.
 - (3) Perihepatic packing is effective for both venous as well as arterial bleeding.
 - (4) Mesh wrapping technique in which absorbable mesh is wrapped to re-approximate shattered liver may be useful to prevent the need for mandatory re-operation.
 - (5) Question not attempted
59. Complete avulsion of Gall Bladder from liver bed is classified as per the American Association for the Surgery of Trauma (AAST) as
- (1) AAST Grade I
 - (2) AAST Grade II
 - (3) AAST Grade III
 - (4) AAST Grade IV
 - (5) Question not attempted
60. The Aird maneuver is useful for visualization of
- (1) Posterior aspect of tail of pancreas
 - (2) Anterior surface of pancreas
 - (3) Uncinate process of pancreas
 - (4) Posterior aspect of head of pancreas
 - (5) Question not attempted

61. Which of the following is not true regarding splenic artery aneurysms (SAA) and pseudoaneurysms ?
- (1) Pregnancy is associated with an increased risk of splenic artery aneurysms (SAA).
 - (2) Portal hypertension is associated with increased risk of SAAs.
 - (3) True SAAs are seen more frequently in females.
 - (4) Pseudoaneurysms of splenic artery are more common than the true aneurysms.
 - (5) Question not attempted
62. All of the following are correct regarding Hemobilia, except
- (1) Iatrogenic injuries are now thought to account for over 70% of all cases of hemobilia.
 - (2) Penetrating trauma is more commonly associated with hemobilia as compared to blunt trauma.
 - (3) Risk of hemobilia after percutaneous liver biopsy is less than 0.1%.
 - (4) Risk of hemobilia after percutaneous trans-hepatic biliary drainage is 1-2%.
 - (5) Question not attempted
63. Which of the following is not true regarding operative management of duodenal trauma ?
- (1) If a duodenal hematoma is visualized in the operating room, the hematoma should be evaluated and a seromuscular repair should be completed.
 - (2) Duodenal lacerations always require operative intervention.
 - (3) AAST-II grade injuries of duodenum require either a decompressive or diversion procedure.
 - (4) A staged approach should be tried in case a 'trauma whipple' is required.
 - (5) Question not attempted
64. Which of the following statements is not true regarding the management of Hepatic Artery Aneurysms (HAA) ?
- (1) Elective repair of HAA is associated with a mortality rate of upto 5%.
 - (2) Emergency repair of HAA is associated with a mortality rate of 20 to 30%.
 - (3) Endovascular approach is associated with higher need for re-intervention as compared to surgery.
 - (4) Endovascular approach is associated with lower short-term mortality.
 - (5) Question not attempted
65. Which of the following arteries is responsible for the majority of arteriportal fistulas (APF) ?
- (1) Hepatic artery
 - (2) Splenic artery
 - (3) Left gastric artery
 - (4) Superior mesenteric artery
 - (5) Question not attempted
66. Which of the following is not true regarding type I Congenital Portosystemic Shunts (CPS) ?
- (1) End-to-side shunt between portal vein (PV) and inferior vena cava (IVC) with no intrahepatic portal flow.
 - (2) Balloon occlusion of shunt may reveal small hypoplastic intrahepatic PV structures.
 - (3) Usual treatment involves careful ligation of the shunt.
 - (4) Liver transplant has been described for Type I CPS associated with refractory encephalopathy.
 - (5) Question not attempted

67. Which of the following is not true regarding antibody-mediated rejection (AMR) ?

- (1) The overall rate of AMR is estimated to be 1% of all liver transplants.
- (2) AMR is treated with plasmapheresis, intravenous immunoglobulin (IVIG) and Rituximab.
- (3) AMR is diagnosed with C4D – positive stained biopsies.
- (4) Positive donor specific antigen does not impact the rate of AMR.
- (5) Question not attempted

68. All of the following are true regarding hyper-acute rejection (HAR), except

- (1) It is caused by donor-specific antibody that exist at the time of transplant.
- (2) HAR is avoided by confirming ABO compatibility and performing a cross-match to detect donor-specific antibodies.
- (3) A positive cross-match for donor-specific antibodies is an absolute contraindication to pancreas transplantation.
- (4) The rates of acute rejection and graft survival for liver are lower with positive cross-match for donor specific antibodies.
- (5) Question not attempted

69. All of the following are true regarding sirolimus, except

- (1) It is a macrolide antibiotic.
- (2) It renders T-cells incapable of IL-2 gene transcription.
- (3) It is associated with increased risk of hepatic artery thrombosis in first month after liver transplantation.
- (4) It is beneficial in patients transplanted for hepatocellular carcinoma.
- (5) Question not attempted

70. Which of the following is/are calcineurin inhibitors ?

- a. Cyclosporine b. Tacrolimus
c. Sirolimus d. Everolimus
- (1) a and b (2) a and c
 - (3) a, b and c (4) a, b, c and d
 - (5) Question not attempted

71. Which of the following is not a contraindication to liver transplantation under Mayo Hilar Cholangiocarcinoma transplant protocol ?

- (1) Tumor > 3 cm
- (2) CA 19.9 > 100
- (3) Presence of nodal metastasis
- (4) Previous resection attempt
- (5) Question not attempted

72. Which of the following is not true regarding post-transplant lymphoproliferative disorder (PTLD) ?

- (1) It is strongly associated with the replication of Epstein-Barr virus in B cells.
- (2) An association with CMV infection has also been noted.
- (3) Polyclonal PTLD is more difficult to treat than monoclonal PTLD.
- (4) Incidence of PTLD varies from 1% to 3% among liver transplant recipients.
- (5) Question not attempted

73. All of the following methods may be used for prevention of small-for-size syndrome after living donor liver transplant, except

- (1) Reconstruction of segment 5 and 8 veins
- (2) Splenic vein ligation
- (3) Using right lobe graft
- (4) Hemiportacaval shunt
- (5) Question not attempted

74. Which of the following is not true regarding procurement injury to the liver graft during deceased donor liver harvest ?

- (1) Occurs in 20-30% of cases.
- (2) Aberrant hepatic artery ligation and division is the most common major injury.
- (3) Injury to liver parenchyma is the most common form of minor injury.
- (4) Injury to aberrant right or left hepatic artery is usually inconsequential.
- (5) Question not attempted

75. Which of the following is the correct sequence of anastomosis during piggyback deceased donor liver transplantation ?

- (1) Caval → Portal vein → Hepatic artery → Bile duct
- (2) Caval → Hepatic artery → Portal vein → Bile duct
- (3) Portal vein → Hepatic artery → Caval → Bile duct
- (4) Portal vein → Caval → Hepatic artery → Bile duct
- (5) Question not attempted

76. Which of the following is not true regarding lymphoproliferative disorders occurring after liver transplant ?

- (1) Most are large cell lymphomas
- (2) Most are B-cell type
- (3) Extra nodal involvement is seen in 70% of cases
- (4) Non-Hodgkin lymphoma accounts for 50% of lymphomas in transplant recipients
- (5) Question not attempted

77. All of the following are useful in the treatment of porto-pulmonary hypertension, except

- (1) Endothelin receptor antagonist
- (2) Beta blocker
- (3) Phosphodiesterase type 5 inhibitors
- (4) Prostanoids
- (5) Question not attempted

78. Which of the following is not true regarding hepatic artery thrombosis (HAT) after liver transplantation ?

- (1) Overall incidence of HAT in adults is 1.6 to 8%.
- (2) CMV positive donor in a CMV negative recipient is a risk factor.
- (3) Early HAT is usually treated by anticoagulation.
- (4) Late HAT has a lower frequency and tends to have better prognosis as compared to early HAT.
- (5) Question not attempted

79. Which of the following is not true regarding Hepato-pulmonary syndrome (HPS) ?
- (1) Patients with HPS have fall in arterial blood oxygen in upright position.
 - (2) HPS may be an indication for liver transplant even in the presence of otherwise good liver function.
 - (3) Severity of the HPS correlates with the severity of cirrhosis.
 - (4) HPS improves after liver transplantation in majority of patients.
 - (5) Question not attempted
80. All of the following are risk factors for primary non-function (PNF) after liver transplantation, except
- (1) macrovesicular steatosis of donor liver
 - (2) long cold ischaemia time
 - (3) male donor
 - (4) older donor
 - (5) Question not attempted
81. **Assertion A :** Portal vein thrombosis (PVT) observed before surgery is an absolute contra-indication to orthotopic liver transplantation.
- Reason R :** PVT substantially increases the surgical complexity and peri-operative morbidity of liver transplant.
- (1) Both A and R are individually true and R is the correct explanation of A.
 - (2) Both A and R are individually true but R is not the correct explanation of A.
 - (3) A is true but R is false.
 - (4) A is false but R is true.
 - (5) Question not attempted
82. All of the following factors have been implicated in the development of post-transplant biliary strictures, except
- (1) ABO incompatibility
 - (2) Deceased donor liver transplant
 - (3) Paediatric transplant
 - (4) Viral infections
 - (5) Question not attempted
83. Which of the following will not be given priority for liver transplant as per the current UNOS criteria ?
- (1) A 1.5 cm tumor (Hepatocellular carcinoma, HCC) in right lobe of liver
 - (2) A 4.5 cm HCC in left lobe of liver
 - (3) Two 2 cm HCC in right lobe and one 2.5 cm HCC in left lobe
 - (4) A 6.5 cm HCC in right lobe of liver treated by TACE and now has been down stayed to 4 cm
 - (5) Question not attempted
TACE (Trans arterial chemo-embolization)
84. The Transplantation Of Human Organs Act, that paved the way for deceased donor liver transplant in India was passed in which year by the Indian Parliament ?
- (1) 1990
 - (2) 1994
 - (3) 1998
 - (4) 2002
 - (5) Question not attempted
85. As compared to the classical OLT technique, the piggyback technique of liver transplantation is associated with all of the following, except
- (1) Reduced blood loss
 - (2) Shorter warm ischaemia times
 - (3) Lower rate of acute kidney injury
 - (4) Decreased rate of outflow obstruction
 - (5) Question not attempted

86. Calculation of Pediatric End stage Liver Disease (PELD) score includes all, except

- (1) Bilirubin
- (2) Albumin
- (3) Creatinine
- (4) Growth failure
- (5) Question not attempted

87. A 54 year old man, who underwent liver transplantation 3 years ago, has been maintained on tacrolimus monotherapy as immunosuppressive therapy for 2.5 years. His serum creatinine has risen progressively over the past year from 1.4 mg/dL to 2.5 mg/dL. Spot urinalysis is negative for ketones, bilirubin and hemoglobin, but 2+ proteinuria is present. Which of the following is the most appropriate strategy to preserve the patient's remaining renal function while minimizing the risk of developing rejection?

- (1) Stop tacrolimus and switch to sirolimus
- (2) Stop tacrolimus and switch to mycophenolate mofetil and corticosteroids
- (3) Combine low dose tacrolimus with mycophenolate mofetil
- (4) Stop tacrolimus; give monthly doses of basiliximab as maintenance therapy
- (5) Question not attempted

88. The latest MELD score known as MELD 3.0 has incorporated which one of the following parameter?

- (1) Creatinine
- (2) Bilirubin
- (3) Albumin
- (4) International Normalized Ratio (INR)
- (5) Question not attempted

89. High risk Kings College criteria for Acute liver failure (non-paracetamol) includes all, except

- (1) Age < 10 or Age > 40
- (2) INR > 3.5
- (3) Jaundice to Encephalopathy < 7 days
- (4) Serum bilirubin > 17.5 mg/dL
- (5) Question not attempted

90. In which of the following situations is small for size syndrome most likely to occur?

- (1) A right lobe graft from a 34 year old donor with a Graft to Recipient Weight Ratio (GRWR) of 1.2% being implanted into a 45 year old recipient with a Model for End stage Liver Disease (MELD) score of 23.
- (2) A left lobe graft from a 32 year old donor with a GRWR 0.9% being implanted into a 5 year old.
- (3) A right lobe graft from a 54 year old donor with a GRWR of 0.9% being implanted into a 45 year old recipient with a MELD score of 35.
- (4) A right lobe graft from a 29 year old donor with a GRWR of 0.8% being implanted into a 34 year old recipient with a MELD score of 15.
- (5) Question not attempted

91. A 47 year old patient presents with acute on chronic liver failure. At the time of evaluation for liver transplant her height is 5 feet, 3 inches tall, weight, (not including ascites) 150 lbs, BMI 26.6 kg/m²; her MELD score is 29. She has blood group O. Abdominal MR scanning shows a cirrhotic-appearing liver, moderate ascites, but no hepatocellular carcinoma. Her husband initiates the process of evaluation as a living liver donor. He is a healthy man of 49 years. He has blood group O.

Which of the following most accurately describes the risk/benefit ratio were she to receive a living donor liver transplant (LDLT)?

- (1) She is less likely to die by electing to have a LDLT now rather than waiting for a deceased donor liver transplant (DDLT).
- (2) The diagnosis of HCV makes this patient a less good candidate to receive a LDLT compared to a DDLT.
- (3) This patient's MELD score makes her a more suitable for DDLT than LDLT.
- (4) This patient is more likely to develop acute cellular rejection if she receives a LDLT than if she receives a DDLT.
- (5) Question not attempted

92. According to studies, how does mortality change with each MELD point increase?

- (1) Decreases by approximately 1%.
- (2) Increases by approximately 1% up to a MELD score of 20 and 2% above 20.
- (3) Increases by 2%.
- (4) Doubles with every 3 point increase.
- (5) Question not attempted

93. What is the most significant factor limiting long-term survival after resection of colorectal liver metastases in patients with KRAS mutations?

- (1) Extrahepatic disease
- (2) Number of metastases
- (3) Tumor response to chemotherapy
- (4) Margin status (R0 vs. R1)
- (5) Question not attempted

94. A 23 year old female presented to the emergency room 12 hours after ingesting 24 grams of acetaminophen – she was awake but was disoriented and agitated. Her on laboratory tests on admission were as follows : arterial pH : 7.32, AST : 1300 IU/dL, Total bilirubin 1.2 mg/dL, INR : 2.9, serum creatinine : 3.1 mg/dL.

She was commenced on N-acetylcysteine and an evaluation for liver transplantation was begun. Which of the following most accurately estimates this patient's likelihood of spontaneous recovery?

- (1) 10-20% (2) 21-40%
- (3) 41-60% (4) > 60%
- (5) Question not attempted

95. In a patient with a 10 cm hepatic hemangioma causing Kasabach-Merritt syndrome, what is the most appropriate definitive treatment ?
- (1) Observation with serial imaging
 - (2) Trans-arterial embolization
 - (3) Surgical resection
 - (4) Liver transplantation
 - (5) Question not attempted
96. In a patient with Focal Nodular Hyperplasia (FNH) and a coexisting hepatic adenoma, what is the most appropriate imaging modality to differentiate the two lesions ?
- (1) Contrast-enhanced CT
 - (2) Hepatobiliary MRI with gadoxetate disodium (Eovist)
 - (3) PET-CT
 - (4) Doppler ultrasound
 - (5) Question not attempted
97. According to a recent RCT published in 2023, which adjuvant therapy following liver resection for HCC showed a significant reduction in 2-year recurrence rates ?
- (1) Sorafenib
 - (2) Lenvatinib
 - (3) Atezolizumab plus bevacizumab
 - (4) Capecitabine
 - (5) Question not attempted
98. In a patient undergoing associating liver partition and portal vein ligation for staged hepatectomy (ALPPS) for CRLM, what is the most common cause of postoperative mortality ?
- (1) Sepsis from bile leak
 - (2) Post-hepatectomy liver failure
 - (3) Pulmonary embolism
 - (4) Myocardial infarction
 - (5) Question not attempted
99. Regarding hepatorenal syndrome (HRS) all the following are true, except :
- (1) HRS, occurs in advanced stage liver disease, represents a functional renal failure caused by intrarenal vasoconstriction combined with splanchnic vasodilation.
 - (2) Type 2 HRS is characterized by a rapid and progressive deterioration in renal function.
 - (3) Terlipressin, either alone or in combination with albumin or TIPS, are the main therapies for HRS.
 - (4) Noradrenaline has been compared with terlipressin without findings of significant outcome difference in randomized trials.
 - (5) Question not attempted
100. Regarding post hepatic liver failure (PHLF) classification, all the following are true, except :
- (1) Grade A is defined by abnormal INR (<1.5) and bilirubin on POD 5 but no deviation in clinical management
 - (2) Grade B patients have INR ≥ 1.5 but < 2 ; potentially some somnolence or confusion and may require non-invasive ventilation and albumin transfusions.
 - (3) Grade C patients have INR ≥ 2 , Hepatic encephalopathy and severe hypoxemia.
 - (4) Grade B patients may have non-oliguric renal failure despite use of diuretics.
 - (5) Question not attempted
101. Which of the following is not a Hepatobiliary specific MRI Contrast agent ?
- (1) Mangafodipir trisodium
 - (2) Gadobenate Dimeglumine
 - (3) Gadoxetic acid disodium
 - (4) Gadopentate Dimeglumine
 - (5) Question not attempted

102. Regarding frailty all the following are true, except :

- (1) Frailty comprises a more global assessment of physiology, comorbidity and resilience.
- (2) Modified Frailty Index (mFI) focusses on the individuals cardiovascular health, presence of diabetes, chronic respiratory illness and/or adverse cerebrovascular events.
- (3) Frailty is a risk factor for multiple adverse outcomes such as surgical complications, mortality, and loss of functional independence.
- (4) It has been established that decreasing frailty in the preop period definitely improves postop outcome following HPB surgery.
- (5) Question not attempted

103. Apart from direct CVP monitoring all the following modalities give accurate indirect estimates of the CVP during liver surgery, except :

- (1) Stroke volume variation monitoring
- (2) Intrahepatic IVC caliber measurements
- (3) IntraopDoppler based assessment of total hepatic blood inflow
- (4) Intraoperative trans-esophageal echocardiography
- (5) Question not attempted

104. According to a PRODIGE 24/CCTG PA.6 trial, which adjuvant therapy after pancreatic ductal adenocarcinoma resection improved overall survival ?

- (1) Gemcitabine alone
- (2) Gemcitabine plus erlotinib
- (3) mFOLFIRINOX
- (4) Capecitabine
- (5) Question not attempted

105. Which subtype of Hepatocellular adenoma (HCA) shows atoll sign in CEMRI ?

- (1) HNF alpha inactivated HCA
- (2) Beta catenin mutated HCA
- (3) Inflammatory HCA
- (4) Sonic Hedgehog HCA
- (5) Question not attempted

106. Which of the following is not the function of Ito cells ?

- (1) Store fat
- (2) Retinol metabolism
- (3) Induce fibrogenic response to injury
- (4) Secrete vasodilator Nitric oxide
- (5) Question not attempted

107. All the following are true regarding acute variceal bleeding in cirrhotics, except :

- (1) An HVPG of 20 mm Hg or higher, Child-Turcotte-Pugh class C, and active bleeding at endoscopy are the variables most consistently found to predict five-day rebleeding treatment failure.
- (2) Endoscopic ligation/sclerotherapy and pharmacotherapy is the initial strategy and controls 80% to 85% of bleeding episodes.
- (3) In patients at high risk for treatment failure benefit from early surgical portocaval shunting (within 72 hours).
- (4) Emergency portacaval shunt has a success rate of 95% in stopping acute and refractory variceal bleeding.
- (5) Question not attempted

108. Most common site of heterotopic pancreas is
- (1) Duodenum
 - (2) Stomach
 - (3) Jejunum
 - (4) Meckel's diverticulum
 - (5) Question not attempted
109. The use of t-tube for draining bile duct after CBD exploration was introduced by
- (1) Ludurg Georg Courvoisier
 - (2) Johannes Otto Kehr
 - (3) Caesar Roux
 - (4) Jean -François Calot
 - (5) Question not attempted
110. The MELD score was developed by
- (1) Roger Williams
 - (2) Patrick Kamath
 - (3) Roy Kalne
 - (4) Ronald Busuttis
 - (5) Question not attempted
111. Which of the following is not true regarding total pancreatectomy with Islet cell auto-transplantation ?
- (1) Chronic pancreatitis is the most common indication.
 - (2) Pain relief is better in children as compared to adults.
 - (3) Complete Insulin independency is achieved in half of the patients.
 - (4) Alcoholic chronic pancreatitis results in worse outcome than chronic pancreatitis of other causes.
 - (5) Question not attempted
112. Flank ecchymosis seen in severe acute pancreatitis is
- (1) Grey Turner's sign
 - (2) Cullen's sign
 - (3) Trousseau's sign
 - (4) Courvoisier's sign
 - (5) Question not attempted
113. During whole pancreas transplant, all of the following donor blood vessels are used in reconstruction, except
- (1) Superior mesenteric artery
 - (2) Splenic artery
 - (3) Portal vein
 - (4) Gastroduodenal artery
 - (5) Question not attempted
114. The Edmonton protocol for allogenic islet transplantation uses all of the following immuno-suppressive agents, except
- (1) IL-2 receptor antibody
 - (2) Sirolimus
 - (3) Corticosteroids
 - (4) Tacrolimus
 - (5) Question not attempted
115. How many islet cells are required to regain normoglycemia in majority of allogenic islet cell transplantation recipients with diabetes ?
- (1) 2,00,000
 - (2) 1.5 to 2 million
 - (3) 50,000 to 1,00,000
 - (4) 7,00,000 to 10,00,000
 - (5) Question not attempted
116. Which of the following is the most commonly performed pancreatic transplant procedure ?
- (1) Pancreas after kidney transplant
 - (2) Simultaneous Pancreas and kidney transplant
 - (3) Pancreas transplant alone
 - (4) Living donor distal pancreas transplantation
 - (5) Question not attempted

117. Following are the landmarks during the embryologic development of liver and the gestational age at which the landmark is achieved :

- A. Bile acid synthesis – 10 weeks
- B. Bile secretion – 12-14 weeks
- C. Appearance of Kupffer cells – 5 weeks
- D. Appearance of Stellate cells – 6 weeks

Which of the above are correctly matched ?

- (1) A and B (2) A and C
- (3) B and D (4) B and C
- (5) Question not attempted

118. Which of the following is a direct non-invasive test of exocrine pancreatic function ?

- (1) Fecal fat quantification
- (2) Secretin-Cholecystokinin test
- (3) ^{13}C -mixed triglyceride breath test
- (4) Fecal elastase – 1
- (5) Question not attempted

119. Which of the following is not true regarding the blood supply of the liver ?

- (1) Portal vein supplies 50-70% of liver's normal oxygen requirement.
- (2) Portal vein pressure ranges between 6 and 10 mm of Hg in humans when measured by direct cannulation.
- (3) The oxygen saturation of portal vein is around 50% during fasting states.
- (4) Hepatic artery supplies 25% of the total blood flow to the liver.
- (5) Question not attempted

120. Alexander Von Winiwarter performed the first biliary bypass for malignant obstructive process by anastomosing

- (1) Gall bladder with Colon
- (2) Gall bladder with Jejunum
- (3) Bile duct with Jejunum
- (4) Bile duct with Duodenum
- (5) Question not attempted

121. Match List-I (diagnosis) with List-II (radiological feature) and select the correct answer by using the codes given below the lists :

List-I

- A. Hemangioma
- B. Hepatocellular carcinoma
- C. Focal nodular hyperplasia
- D. Intrahepatic cholangiocarcinoma

List-II

- i. Capsular retraction
- ii. Peripheral nodular enhancement
- iii. Arterial enhancement with venous washout
- iv. Homogenous arterial phase enhancement fading to background liver intensity by portal venous phase

- | | A | B | C | D |
|-----|------------------------|-----|-----|-----|
| (1) | ii | iii | iv | i |
| (2) | ii | iv | iii | i |
| (3) | iii | iv | i | ii |
| (4) | iv | i | ii | iii |
| (5) | Question not attempted | | | |

122. Which of the following is not true regarding the hepatic and gall bladder bile ?

- (1) Sodium concentration is higher in gall bladder bile as compared to hepatic bile.
- (2) Gall bladder bile has 3 times concentration of bile acids as compared to hepatic bile.
- (3) Gall bladder bile has higher concentration of bicarbonate as compared to hepatic bile.
- (4) Gall bladder bile has lower concentration of chloride as compared to hepatic bile.
- (5) Question not attempted

123. Which of the following structures courses through the scissurae that divide liver into four sectors ?

- (1) Portal veins
- (2) Hepatic arteries
- (3) Hepatic veins
- (4) Bile duct branches
- (5) Question not attempted

124. All of the following are true regarding Organic Anion Transporting Polypeptides (OATPs), except

- (1) OATPs mediate sodium independent hepatic uptake of bile acids
- (2) These transporters have broader substrate cellinity and transport a variety of organic anions.
- (3) They account for more than 80% of taurocholate uptake
- (4) OATP-8 mediates taurocholate uptake
- (5) Question not attempted

125. All of the following are best seen on a non-contrast computed tomography scan, except

- (1) Fatty liver
- (2) Calcifications
- (3) Hemochromatosis
- (4) Focal nodular hyperplasia (FNH)
- (5) Question not attempted

126. All of the following are hyper-vascular liver metastases, except

- (1) Melanoma
- (2) Neuroendocrine tumor
- (3) Thyroid cancer
- (4) Pancreatic cancer
- (5) Question not attempted

127. All of the following are risk factors for the development of post-operative pancreatic fistula (POPF), except

- (1) Soft pancreas
- (2) Duct size < 3 mm
- (3) Neo-adjuvant radiotherapy
- (4) BMI > 25
- (5) Question not attempted

128. The break-through innovation of a safe two-stage resection of pancreatic head was 1st achieved by

- (1) Codivilla (2) Kausch
- (3) A.O. Whipple (4) Halsted
- (5) Question not attempted

129. Which of the following is not true regarding cholecystokinin ?

- (1) It is secreted by I cells in the duodenal mucosa.
- (2) It is the main mediator of the secretion of water and bicarbonate in pancreatic juice.
- (3) It induces relaxation of sphincter of Oddi.
- (4) It reduces the release of pancreatic enzymes by acinar cells.
- (5) Question not attempted

130. Both insulin and glucagon can be detected in fetal circulation by

- (1) 10-12 weeks of fetal development
- (2) 8-10 weeks of fetal development
- (3) 14-18 weeks of fetal development
- (4) 6-8 weeks of fetal development
- (5) Question not attempted

131. Which of the following is the most abundant islet cell in human pancreas ?

- (1) Alpha cell (2) Beta cell
- (3) Delta cell (4) F-cell
- (5) Question not attempted

132. Which of the following is not true regarding Hepatic Artery Buffer Response (HABR) ?

- (1) Reduced portal blood flow results in dilatation of hepatic artery
- (2) Increased portal blood flow results in contraction of hepatic artery
- (3) Adenosine is the main mediator of HABR
- (4) HABR remains intact in the transplanted human liver.
- (5) Question not attempted

133. Assertion (A) : Complete long-term dearterialization of the liver by any form of arterial vascular occlusion is difficult to achieve.

Reason (R) : Revascularization occurs through inferior phrenic artery, gastroduodenal artery or intrahepatic translobar anastomosis, depending on the site of arterial occlusion.

- (1) Both (A) and (R) are individually true and (R) is the correct explanation of (A).
- (2) Both (A) and (R) are individually true but (R) is not the correct explanation of (A).
- (3) (A) is true but (R) is false.
- (4) (A) is false but (R) is true.
- (5) Question not attempted

134. Sarcopenia is identified using computed tomography to estimate lean muscle mass of psoas muscle at which vertebral level ?

- (1) L1 (2) L2
- (3) L3 (4) T12
- (5) Question not attempted

135. Which of the following is not true regarding phosphate metabolism after hepatectomy ?

- (1) Hypophosphatemia frequently occurs in early days after hepatectomy.
- (2) Failure to develop hypophosphatemia after hepatectomy is a marker of post-operative hepatic insufficiency.
- (3) Development of hypophosphatemia in patients who have post-hepatectomy liver failure may signal a beginning of recovery.
- (4) Hypophosphatemia should not be corrected in early days after hepatectomy.
- (5) Question not attempted

136. Which of the following is not true regarding percutaneous transhepatic cholangiography (PTC) ?

- (1) Right sided puncture is done in the right mid-axillary line below the ninth intercostal space.
- (2) Left sided puncture is done via subxiphoid approach.
- (3) The absence of bile duct dilatation on PTC does not exclude the presence of clinically significant biliary obstruction.
- (4) If a bile duct is not entered in one attempt, the needle should be withdrawn completely and re-introduced from a new site.
- (5) Question not attempted

137. Which of the following is not true regarding the use of laparoscopic ultrasound during laparoscopic cholecystectomy?

- (1) It has a longer learning curve.
- (2) Routine use of laparoscopic ultrasound reduces the risk of biliary and vascular injury.
- (3) It is associated with reduced procedure time as compared with Intra-operative cholangiogram (IOC).
- (4) Is slightly inferior to IOC in detection of CBD stones.
- (5) Question not attempted

138. Which of the following is the leading cause of hepatocellular carcinoma?

- (1) Hepatitis C
- (2) Hepatitis B
- (3) Alcoholic cirrhosis
- (4) Metabolic dysfunction associated fatty liver disease (MAFLD)
- (5) Question not attempted

139. Which of the following is associated with predominantly conjugated hyperbilirubinaemia?

- (1) Gilbert Syndrome
- (2) Crigler-Najjar Syndrome
- (3) Hemolysis
- (4) Dubin-Johnson Syndrome
- (5) Question not attempted

140. The yield of staging laparoscopy would be lowest in which of the following?

- (1) Hilar cholangio carcinoma
- (2) Gall bladder cancer
- (3) Carcinoma body of pancreas
- (4) Borderline resectable pancreatic head cancer
- (5) Question not attempted

141. As compared to delayed cholecystectomy, early laparoscopic cholecystectomy for acute cholecystitis is associated with increased

- (1) operative time
- (2) risk of CBD injury
- (3) conversion to open procedure
- (4) post-operative morbidity
- (5) Question not attempted

142. As compared to pre-operation ERCP followed by laparoscopic cholecystectomy, single stage lap cholecystectomy with CBD exploration is associated with all of the following, except

- (1) Lower cost
- (2) Fewer procedures
- (3) Shorter length of stay
- (4) Higher success rate
- (5) Question not attempted

143. **Assertion (A) :** Patients with hepatitis C infection usually develop hepatocellular carcinoma in absence of cirrhosis.

Reason (R) : Hepatitis C virus DNA becomes incorporated into the host cell genome.

- (1) Both (A) and (R) are individually true and (R) is the correct explanation of (A).
- (2) Both (A) and (R) are individually true but (R) is not the correct explanation of (A).
- (3) (A) is true but (R) is false.
- (4) Both (A) and (R) are false.
- (5) Question not attempted

144. Which of the following is not correct regarding the management of intra-operatively detected bile duct injury ?

- (1) Immediate conversion & end-to-end repair by an experienced HPB surgeon.
- (2) Immediate conversion & bilio-enteric anastomosis by an experienced HPB surgeon.
- (3) Immediate conversion & repair by the operating surgeon, provided that he or she has performed elective biliary re-construction before.
- (4) Drain placement and referral to a higher centre.
- (5) Question not attempted

145. Which of the following choledochal cyst types is not associated with anomalous pancreatic biliary junction (APBJ) ?

- (1) Type 1a (2) Type 1b
- (3) Type 1c (4) Type IV
- (5) Question not attempted

146. Which of the following is not true regarding Primary Sclerosing Cholangitis (PSC) ?

- (1) Upto 40% of patients are incidentally diagnosed
- (2) Occurs in 3-5% of patients with inflammatory bowel disease (IBD)
- (3) Far-eastern patients have higher association with IBD as compared to western patients.
- (4) More commonly affects males than females (2:1)
- (5) Question not attempted

147. By immunohistochemistry, biliary adenocarcinoma typically express all of the following, except

- (1) CK-7 (2) CK-19
- (3) CEA (4) CK-20
- (5) Question not attempted

148. All of the following are the histopathological features of biliary carcinoma that grow into liver, except

- (1) Presence of true glandular element
- (2) Presence of mucin
- (3) Presence of stromal fibrosis & desmoplasia
- (4) Presence of intracellular bile
- (5) Question not attempted

149. All of the following are risk factors for malignancy in gall bladder polyps, except

- (1) Age > 50 yrs
- (2) Polyp size > 10 mm
- (3) Multiple polyps
- (4) Presence of gall stones
- (5) Question not attempted

150. Which of the following is not correct regarding choledochal cyst ?

- (1) Classic triad of abdominal pain, jaundice and palpable mass is seen in 25% of adults with choledochal cyst.
- (2) Initial presentation in adulthood occurs in 25% of patients.
- (3) Clinical pancreatitis is seen in more than half of the patients with choledochal cyst.
- (4) Almost 70% of adults with choledochal cyst who have weight loss, harbor an associated bile duct malignancy.
- (5) Question not attempted

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147. Which of the following is not correct?
 (1) CR-7 (2) CR-10
 (3) CR-15 (4) CR-20

148. All of the following are the histopathological features of chronic cholecystitis, except:
 (1) Presence of acute inflammation
 (2) Presence of chronic inflammation
 (3) Presence of xanthoma cells
 (4) Presence of intraluminal stones
 (5) Question not attempted

149. All of the following are risk factors for malignancy in gall bladder polyps, except:
 (1) Age > 50 yrs
 (2) Polyp size > 10 mm
 (3) Multiple polyps
 (4) Presence of gall stones
 (5) Question not attempted

150. Which of the following is not correct regarding cholelithiasis?
 (1) Cholesterol and calcium salts are predominant and organic acids are seen in 10% of gall stones
 (2) Cholelithiasis is a premalignant condition
 (3) Clinical presentation is seen in more than half of the patients with cholelithiasis
 (4) Almost 70% of gall stones are associated with gall bladder cancer
 (5) Question not attempted

151. Which of the following is not correct regarding the management of gall stones?
 (1) Medical management is not effective
 (2) Laparoscopic cholecystectomy is the gold standard
 (3) Open cholecystectomy is the gold standard
 (4) Question not attempted

152. Which of the following is not correct regarding the management of gall stones?
 (1) Medical management is not effective
 (2) Laparoscopic cholecystectomy is the gold standard
 (3) Open cholecystectomy is the gold standard
 (4) Question not attempted

153. Which of the following is not correct regarding the management of gall stones?
 (1) Medical management is not effective
 (2) Laparoscopic cholecystectomy is the gold standard
 (3) Open cholecystectomy is the gold standard
 (4) Question not attempted

154. Which of the following is not correct regarding the management of gall stones?
 (1) Medical management is not effective
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 (4) Question not attempted

