Printed Pages:17   Sr. No.

CBAT-PC-PNDT-2022-SET-1-C

Time: 2 Hours

Section-A : 50 MCQs of one mark each   = 50 Marks
Section-B : 10 Short Questions with five marks each = 50 Marks
                        Total Marks   = 100 Marks

Roll No. (in figures) …………………………………..…………………………………..

(in words)……………………………………………………………………………

.………………………………………
(Signature of Candidate)

I have checked the entries made above and in the OMR Sheet by the candidate.

.……………………………………….
(Signature of Invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION / INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

1. All the candidates must return the test booklet as well as answer-sheet to the Invigilator concerned before leaving the Examination Hall. If any candidate leaves the examination hall without handing over the test booklet / answer sheet to the Invigilator, a case of use of unfair means/ misbehavior will be registered against him/ her in addition to lodging an FIR with the Police. The answer-sheet of such a candidate will not be evaluated.

2. The candidates must not do any rough work or writing work in the answer-sheet (OMR Sheet). All rough work is to be done in the test booklet.

3. Candidates will be required to darken the circle by using **blue/ black ball point pen** only.

4. Books, papers, slide rule, log table, cellular phone, pager, calculator or any other electronic gadget etc. are not allowed in the Examination Hall.

5. **BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED THE CORRECT AND <u>COMPLETE TEST BOOKLET CONTAINING (SECTION – A : 1 TO 50 MCQs AND SECTION-B : 1 TO 10 SHORT QUESTIONS),</u> COMPLAINTS REGARDING MISPRINT ETC. WILL NOT BE ENTERTAINED 10 MINUTES AFTER THE EXAMINATION GETS STARTED.**

SECTION-A

1. Which of the following is a cause of Gall bladder wall thickening?
   i. Hypoalbuminemia
   ii. Congestive heart failure
   iii. Acute hepatitis
   iv. Pancreatitis

   A. i, ii and iii
   B. ii, iii, and iv
   C. I and iii
   D. i, ii, iii and iv

2. Which of the following conditions are associated with severe fatty changes in the pancreas?
   i. Diabetes
   ii. Cystic fibrosis
   iii. Obesity
   iv. Old age

   A. i, ii and iii
   B. ii, iii and iv
   C. I and iii
   D. i, ii, iii and iv

3. Which of the following is the most common vessel which gets thrombosed in patients with chronic pancreatitis?
   A. Portal vein
   B. Mesenteric vein
   C. Hepatic vein
   D. Splenic vein

4. Cortical nephrocalcinosis occurs due to
   A. Acute cortical necrosis
   B. Sarcoidosis
   C. Vitamin D excess
   D. Wilsons disease

5. Choose the correct statement regarding Ca prostate on USG
   A. Classic appearance as hypoechoic nodule in the peripheral zone.
   B. All the cancers are detectable on TRUS
   C. Most cancers are seen in the transition zone
   D. None of the above

6. In normal postmenopausal women, the endometrial thickness measures
   A. < than 5 mm
   B. 5-8 mm
   C. 8-10 mm
   D. 10-12 mm

7. On ultrasound of ovaries in child bearing age group, internal echoes and fluid debris level are characteristically seen in
   A. Corpus luteal cyst
   B. Follicular cyst
   C. Polycystic ovaries
   D. Theca lutein cyst

8. Which of the following ovarian lesion commonly presents with a highly reflective nodule in the wall of a cystic structure?
   A. Dermoid
   B. Mucinous tumour
   C. Ovarian Endometrioma
   D. Krukenberg's tumour

9. On ultrasound of ovaries, the presence of sharply defined multilocular cystic mass with thin septations and no internal echoes is suggestive of
   A. Sex cord stromal tumour
   B. Mucinous cystadenoma
   C. Endometrioma
   D. Serous cystadenoma

10.   Which of the following criteria on ultrasound is most reliable of pregnancy failure?
A. Mean sac diameter of >20mm without visible yolk sac
B. Absence of double decidual sac sign
C. Irregular shape of gestation sac
D. Poorly reflective decidual reaction

11.   On ultrasound assessment in third trimester for polyhydramnios, the measurement of largest pool of amniotic fluid above what level is considered diagnostic?
A. More than 2 cm   B. More than 4 cm
C. More than 6 cm   D. More than 8 cm

12.   On ultrasound for liver, diffusely increased echogenicity obscuring periportal echogenicity but diaphragmatic echogenicity still appreciable is seen in which of the following grade
A. Grade- I   B. Grade-II
C. Grade-III   D. Grade-IV

13.   On ultrasound of the liver, all the following are cystic lesions EXCEPT
A. Caroli's disease   B. Biliary hamartoma
C. Biliary cystadenoma   D. Hepatic adenoma

14.   On ultrasound of gall bladder, "wall echo-shadow" sign suggests the diagnosis of
A. Cholelithiasis   B. Porcelain gall bladder
C. Emphysematous cholecystitis   D. Cholangitis

15.   The urinary bladder wall on ultrasound is considered thickened if it is greater than ------ in the distended state
A. 3 mm   B. 5 mm
C. 7 mm   D. 10 mm

16.   By definition, ultrasound is sound having a frequency greater than --------- cycles per second, that is, sound above the audible range.
A. 10,000   B. 20,000
C. 30,000   D. 40,000

17.   Which is not echogenic while doing ultrasonography?
A. Bile   B. Gas
C. Bone   D. Gall stones

18.   Most commonly used piezoelectric crystal is :
A. Quartz   B. Cane sugar
C. Lead Zirconate   D. Barium Zirconate

19.   Ultrasound is reflection of-----
A. Soft tissues only   B. Hard tissues only
C. Both soft and hard tissues   D. Hard muscles only

20.   In blighted ovum:
      A. Gestational sac and embryo re both formed.
      B. Gestational sac is formed but embryo does not form
      C. Gestational sac, yolk sac and embryo are formed
      D. None of the above

21.   In an antenatal USG, double bubble sign is seen in :
      A. Duodenal atresia   B. Pyloric Stenosis
      C. Esophageal atresia   D. Jejunal Atresia

22.   PNDT act was conceived in the year
      A. 1992   B. 1994
      C. 1996   D. 2006

23.   Choose the correct statement
      A. Umbilical arteries carry pure blood to fetus from placenta
      B. Umbilical veins carry impure blood to fetus from placenta
      C. Umbilical arteries carry pure blood from the fetus to placenta
      D. Umbilical veins carry pure blood from placenta to fetus

24.   The amniotic fluid volume at 40 weeks measures about
      A. 300-500 ml   B. 600-800 ml
      C. 900-1200 ml   D. 1300-1400 ml

25.   On abdominal ultrasound, gall bladder shows diffuse wall thickening with
      hyperechoic nodules at neck and comet tail artifacts. The most likely
      diagnosis will be
      A. Adenomyomatosis
      B. Adenocarcinoma of gall bladder
      C. Xanthogranulomatous cholecystitis
      D. Cholesterol crystals

26.   Sonographically Echinococcus cysts will have what characteristics?
      A. Cystic structure with no visible capsule
      B. Numerous cysts seen close together
      C. Homogenous / echogenic internal echoes
      D. Cystic structure with a daughter cyst

27.   Which segment of liver is situated superior to the right main portal vein and
      posterior to right and middle hepatic veins?
      A. Segment VII   B. Segment VIII
      C. Segment IV A   D. Segment VI

28.   High risk features of a cystic pancreatic lesion are all, except
      A. Growth on serial examination   B. Diameter <3cm
      C. Internal soft tissue   D. Mural or septal thickening

29.   Which of the following is not an USG feature of chronic cholecystitis?
      A. Distended gall bladder   B. Wall echo shadow complex
      C. Thickened gall bladder wall   D. Gall stones

30. In Mirizzi's Syndrome, findings include all, except
   A. IHBR dilatation
   B. Intrahepatic calculi
   C. Calculus in cystic duct
   D. Normal distal CBD

31. Rotterdam Consensus Criteria for USG diagnosis of PCOS include all, except
   A. >12 follicles
   B. Follicular size between 2-9 mm
   C. Reduced stromal echogenicity
   D. Ovarian volume >10cc

32. Following a uterine curettage, US appearance of multiple cystic spaces in and around the uterus with intense color fill-in is suggestive of
   A. Invasive choriocarcinoma
   B. Ectopic pregnancy
   C. Uterine AVM
   D. Hydatidiform mole

33. In a patient suspected to have endometrial adhesions, the modality of choice to evaluate is
   A. Transabdominal ultrasound
   B. Transvaginal ultrasound
   C. Sonohysterography
   D. Contrast enhanced ultrasound

34. Poorly defined areas of decreased echogenicity, heterogeneity and small cystic spaces in the myometrium on US are suggestive of
   A. Leiomyomatosis
   B. Endometriosis
   C. Senile myometrial atrophy
   D. Adenomyosis

35. Which of the following statements of sonographic features of hypertrophied column of Bertin is false?
   A. Indents the renal sinus laterally
   B. Usually located at the junction of middle and lower thirds
   C. Does not distort the renal outline
   D. Contain the renal pyramid

36. Mass in the retroperitoneum with a negative beak sign with the kidney suggests
   A. The mass originates from the kidney
   B. The mass is extrarenal in origin
   C. Could be either extra- renal or renal in origin
   D. Neither of the above

37. Low lying placenta is defined as a placenta lying within ____ of the internal cervical os
   A. 2 cm
   B. 4 cm
   C. 1 cm
   D. 8 cm

38. The optimum age for chorionic villous sampling is
   A. 6-8 weeks
   B. 10-12 weeks
   C. 14-16 weeks
   D. 18-20 weeks

39. 'Lambda' sign seen in twin gestation suggests
   A. Monochorionicity
   B. Dichorionicity
   C. Monoamniocity
   D. Diamniocity

40. On transvaginal sonography, gestation sac can be first identified at
    A. 2 weeks   B. 5 weeks
    C. 8 weeks   D. 11 weeks

41. Commonest site of tubal pregnancy is
    A. Infundibular   B. Isthmic
    C. Ampullary   D. Cornual

42. Doppler features of utero-placental insufficiency include all of the following except
    A. Reversal of flow in umbilical artery
    B. Persistent uterine notch
    C. Early involvement of MCA
    D. Absent flow in umbilical artery

43. The formula for acoustic impedance using density (ρ) of the medium and the sound propagation velocity (c) in that medium is
    A. $\rho \times c$ B. $\rho + c$
    C. ρ / c D. None of the above

44. Most echoes in the body arise from
    A. Specular reflectors   B. Diffuse reflectors
    C. Geometric reflectors   D. None of the above

45. Misregistration artifact in the ultrasound images occurs due to
    A. Attenuation   B. Refraction
    C. Reflection   D. None of the above

46. Which of the following body tissue has the lowest attenuation?
    A. Fat   B. Liver
    C. Muscle   D. Bone

47. High dynamic range allows differentiation of
    A. Small differences in the echo intensity
    B. Large differences in the echo intensity
    C. It does not affect the ability to perceive echo intensity
    D. Bone lesion from the soft tissue lesion

48. Advantages of power doppler are
    i. No aliasing
    ii. Much less angle dependence
    iii. Noise: A homogeneous background color
    iv. Increased sensitivity for flow detection

    A. i and ii   B. i, ii and iii
    C. ii and iii only   D. i, ii, iii and iv

49.   Which of the following causes greatest tissue temperature elevation
        A. B mode
        B. Color Doppler
        C. Spectral Doppler
        D. All of them cause equal rise in temperature

50.   Caudate Lobe of the liver constitutes segment
        A. I   B. II
        C. III   D. IV

SECTION-B

Short Questions

Q.1.   Placenta accreta spectrum.

Q. 2.   Sonographic and doppler findings in renal artery stenosis.

Q. 3.   Sonographic findings in liver metastasis.

Q. 4. Ultrasound and doppler findings in testicular torsion.

Q. 5.   Sonographic findings in pelvic inflammatory disease.

Q. 6.   Describe various sonographic artefacts.

Q. 7. How would you optimize the machine settings for a Doppler examination?

Q. 8.   Approach to a patient with female infertility on sonography.

Q. 9.   First trimester ultrasound scan.

Q.10. Sonographic Evaluation of a patient with history of multiple prior abortions.

ROUGH WORK

ANSWER KEY OF COMPETENCY BASED ASSESSMENT TEST
(SIX MONTHS ULTRASOUND TRAINING RULES AS PER PC-PNDT ACT, 2014
EXAM HELD ON 15.11.2022

SET-C							
1	D	14	A	27	A	40	B
2	D	15	A	28	B	41	C
3	D	16	B	29	A	42	C
4	A	17	A	30	B	43	A
5	A	18	C	31	C	44	B
6	A	19	C	32	C	45	B
7	A	20	B	33	C	46	A
8	A	21	A	34	D	47	A
9	D	22	B	35	B	48	D
10	A	23	D	36	B	49	C
11	D	24	B	37	A	50	A
12	B	25	A	38	B		
13	D	26	D	39	B		