

RPSC Asst. Prof.

**Previous Year Paper
(Surgical Oncology)
03 Jul, 2025**

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

MPA-25

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.

पुस्तिका में पृष्ठों की संख्या : 24
Number of Pages in Booklet : 24
पुस्तिका में प्रश्नों की संख्या : 150
No. of Questions in Booklet : 150



Paper Code : 68

Sub : Surgical Oncology

समय : 02:30 घण्टे + 10 मिनट अतिरिक्त*

Exam Date 03/07/2025

अधिकतम अंक : 150

Time : 02:30 Hours + 10 Minutes Extra*

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/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 राजस्थान सार्वजनिक परीक्षा (भर्ती में अनुचित साधनों की रोकथाम अध्यापय) 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।

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 मंगे जाने पर प्रस्तुत करनी होगी।

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.

1. Following Cancers having strong evidence of risk relation to physical activities except
 - (1) Colon
 - (2) Rectum
 - (3) Endometrium
 - (4) Bladder
 - (5) Question not attempted
2. Regarding HPV vaccination for primary prevention of carcinoma cervix, which of the following statements is incorrect ?
 - (1) Cervarix is a bivalent vaccine, protecting against HPV subtypes 6 and 11.
 - (2) HPV 16 and 18 accounts for 70% of cervical cancers.
 - (3) FDA approved the use of Gardasil 9 to include individuals ages 27 years to 45 years.
 - (4) Cervarix and Gardasil reduces the risk of CIN 1, 2 and 3 by more than 95%.
 - (5) Question not attempted
3. Which one of the following cancers is not included as the focus areas of the cancer screening aimed at strengthening cancer control efforts, focusing on health promotion, early detection, and treatment infrastructure for cancer under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) ?
 - (1) Oral Cancer
 - (2) Breast Cancer
 - (3) Ovarian Cancer
 - (4) Cervical Cancer
 - (5) Question not attempted
4. Which of the following statement about Bupropion use for treatment of Nicotine dependence is incorrect ?
 - (1) It blocks Nicotine receptor and reduces reward.
 - (2) Inhibits the reuptake of both Dopamine and Norepinephrine.
 - (3) Dose is 150 mg twice daily for 7 – 12 wks.
 - (4) Dose is 600 mg twice daily for 7 – 12 wks.
 - (5) Question not attempted
5. Former smoking is being defined as
 - (1) No current cigarette use and having quit smoking for more than 1 year.
 - (2) Stopped smoking in the recent past, typically for a period of 1 week – 1 year.
 - (3) Smoked fewer than 100 cigarettes in a person's lifetime and no current cigarette use.
 - (4) Actively smoking one or more cigarettes per day, every day or some days.
 - (5) Question not attempted
6. Adjuvant olaparib is indicated for patients with BRCA1 – or BRCA2 – mutated high-risk breast cancer. What is the dose of this drug for these patients ?
 - (1) 100 mg per oral twice daily
 - (2) 200 mg per oral twice daily
 - (3) 300 mg per oral twice daily
 - (4) 400 mg per oral twice daily
 - (5) Question not attempted

7. Which one of the following is a topoisomerase-1 inhibitor ?
(1) Epirubicin (2) Irinotecan
(3) Mitoxantrone (4) Etoposide
(5) Question not attempted
8. Which of the following statement is TRUE about Cabazitaxel ?
(1) Cabazitaxel binds to and stabilized the β -tubulin subunit causing cell cycle arrest in G_2/M phase.
(2) Cabazitaxel does not penetrate blood-brain barrier.
(3) Cabazitaxel shorter volume of distribution and shorter terminal half life.
(4) Cabazitaxel binds to and stabilized the β -tubulin subunit causing cell cycle arrest in G_1/S phase.
(5) Question not attempted
9. Dose-limiting adverse effects of the Docetaxel is :
(1) Fluid retention
(2) Peripheral neuropathy
(3) Hypotension
(4) Myelosuppression
(5) Question not attempted
10. Which one of the following clinical features is not associated with carcinoid crisis ?
(1) Severe flushing
(2) Bronchospasm
(3) Hypotension
(4) Bradycardia
(5) Question not attempted
11. Half life of Exemestane is
(1) 12 hours (2) 27 hours
(3) 48 hours (4) 72 hours
(5) Question not attempted
12. What is the adequate suppression level of serum testosterone with medical or surgical castration in prostate cancer ?
(1) < 5 ng/dL (2) < 50 ng/dL
(3) < 5 pg/dL (4) < 50 pg/dL
(5) Question not attempted
13. Which of the following is Incorrect about Tamoxifen ?
(1) Tamoxifen is a prodrug and two most active Tamoxifen metabolites are 4-OH Tamoxifen and Endoxifen.
(2) For women who receive Tamoxifen, the increase in the annual incidence of endometrial cancer is approximately 2.58.
(3) The terminal half-life of Tamoxifen is between 4 and 11 days.
(4) The terminal half-life of Tamoxifen is between 15 and 20 days.
(5) Question not attempted
14. In AJCC Breast cancer staging stage IIIB, INCORRECT is
(1) T_3, N_2, M_0 (2) T_4, N_0, M_0
(3) T_4, N_1, M_0 (4) T_4, N_2, M_0
(5) Question not attempted
15. Which of the following is antiapoptotic molecules ?
(1) Bax (2) Bak
(3) Bcl-2 (4) TP53
(5) Question not attempted

16. Which of the following is not true about Amplification Refractory Mutation System (ARMS) in the process of detection of mutation ?
- (1) It can be used in cancers with multiple mutations.
 - (2) Multiple samples can be tested at the same time.
 - (3) It is Polymerase Chain Reaction based method.
 - (4) Unique primers must be designed for each mutation.
 - (5) Question not attempted
17. In breast cancer risk factors Relative Risk > 4 except
- (1) Mutation BRCA1 or BRCA2 LCIS
 - (2) Atypical hyperplasia
 - (3) Radiation exposure before 30
 - (4) CHEK 2 mutation
 - (5) Question not attempted
18. What is the typical imaging dose of Iodine - 131 for an adult ?
- (1) 0.1 mCi
 - (2) 0.5 mCi
 - (3) 5 mCi
 - (4) 10 mCi
 - (5) Question not attempted
19. Exclusion criteria for Trans Arterial Chemoembolization (TACE) except
- (1) Child-Pugh C cirrhosis
 - (2) Poor performance status (ECOG 3)
 - (3) Total Bilirubin > 4 ng/ml
 - (4) Unresectable disease
 - (5) Question not attempted
20. In patients with differentiated thyroid cancer metastatic to the lateral side of the neck, which preoperative investigation should be considered routine ?
- (1) Ultrasound examination
 - (2) PET scan
 - (3) Contrast-enhanced CT of the neck
 - (4) Diagnostic radioiodine scan
 - (5) Question not attempted
21. Which statement regarding role of PET CT Scan in HNSCC is false ?
- (1) 18F-fluorodeoxyglucose is a glucose analogue that is preferentially absorbed by neoplastic cells.
 - (2) PET is less sensitive than CT in identifying the primary lesion but cannot detect unknown primary tumors with more than 50% sensitivity.
 - (3) More than one third of patients have a change in their TNM score based on PET findings.
 - (4) PET can detect a higher percentage of lung metastases than chest radiography, bronchoscopy or CT.
 - (5) Question not attempted
22. Which of the following statement is INCORRECT about imaging of Liver Metastases ?
- (1) Neuroendocrine and renal cell metastases are most readily detected in the arterial phase.
 - (2) Colorectal metastasis are better visualized in the arterial phase.
 - (3) MRI is the most optimal diagnostic tool test for the detection of hepatic metastases.
 - (4) CT scan is excellent screening modality but poor detection of small (< 1.5 cm) lesions.
 - (5) Question not attempted

23. Assertion (A) : The splenic artery and vein are preserved in Kimura's technique of spleen-preserving distal pancreatectomy.
Assertion (B) : In Warshaw's technique of distal pancreatectomy, the spleen is sacrificed.
- (1) Both A and B are false
 - (2) Both A and B are true
 - (3) A is true, and B is false
 - (4) A is false, and B is true
 - (5) Question not attempted
24. All of the following are correct about chemoport except
- (1) Ideal catheter tip position is 5 cm inside the right atrium.
 - (2) Catheter placement in subclavian vein is associated with higher rate of venous thrombosis.
 - (3) Life span of modern chemoport is more than a year.
 - (4) Short term complications are arterial puncture, pneumothorax and catheter malposition seen in 3% patients.
 - (5) Question not attempted
25. Which vein is not a reliable recipient for venous drainage of a free flap ?
- (1) External jugular vein
 - (2) Internal jugular vein
 - (3) Facial vein
 - (4) Anterior jugular vein
 - (5) Question not attempted
26. Which is / are commonly used Isotopes for brachytherapy ?
- (1) I^{125}
 - (2) Ir^{192}
 - (3) Cs^{137}
 - (4) All of these
 - (5) Question not attempted
27. Which type of radiation exhibits Bragg peak ?
- (1) Photons
 - (2) Protons
 - (3) Electrons
 - (4) X-rays
 - (5) Question not attempted
28. All are true regarding Gray (Gy) except
- (1) Unit of absorbed dose
 - (2) Defined as absorption of one joule of energy per gram of matter
 - (3) 1 Gray = 100 rads
 - (4) Named after Louis Harold Gray
 - (5) Question not attempted
29. Which of the following statements is not true ?
- (1) X-rays are produced by a linear accelerator (LINAC)
 - (2) γ -rays are emitted from radioactive isotopes.
 - (3) Electrons have a relatively long depth of penetration and are used to treat deeper lesions.
 - (4) The older unit of rad is equivalent to 1 centi-gray (cGy; 1 rad = 1 cGy).
 - (5) Question not attempted
30. On September 21, 2024, Quad countries launched a cancer moonshot initiative to reduce the burden of cancer in the Indo-Pacific region. This initiative started with which cancer ?
- (1) Breast cancer
 - (2) Cervical cancer
 - (3) Oral cancer
 - (4) Lung cancer
 - (5) Question not attempted

31. All of the following are correct about Gompertzian model of tumor growth except
- (1) Growth fraction of the tumor is not constant and decreases exponentially with time.
 - (2) Growth fraction peak when the tumor is approximately 37% of its maximum size.
 - (3) Larger tumor mass, low growth fraction, less cells killed.
 - (4) Growth fraction peak when the tumor is approximately 50% of its maximum size.
 - (5) Question not attempted
32. Which of the following statements about the alkylating agents in oncology is untrue ?
- (1) They impair cell function by transferring alkyl groups to amino, carboxyl, sulphydryl, or phosphate groups of biologically important molecules.
 - (2) The primary mode of action is cross-linking DNA strands or breaks in DNA.
 - (3) Tumor resistance is due to the capacity of cells to repair nucleic acid damage and to inactivate the drugs by conjugation with glutathione.
 - (4) Pemetrexed is an alkylating agent.
 - (5) Question not attempted
33. Pertuzumab plus trastuzumab plus docetaxel were found to be superior to docetaxel plus trastuzumab, setting the former combination as the standard of care in which trial ?
- (1) CLEOPATRA
 - (2) EMILIA
 - (3) HERA
 - (4) FinHER
 - (5) Question not attempted
34. Which of the following statements about hematopoietic growth factors is not true ?
- (1) Pegfilgrastim dose is 6 mg.
 - (2) Pegfilgrastim is administered the day after chemotherapy.
 - (3) Filgrastim dose is 5mcg/kg daily.
 - (4) Filgrastim is administered prior to chemotherapy.
 - (5) Question not attempted
35. Human papillomavirus types 16 and 18 are responsible for cervical cancer cases globally :
- (1) 60% (2) 70%
 - (3) 80% (4) 90%
 - (5) Question not attempted
36. Which cells are principally involved in cross presentation of exogenous antigens ?
- (1) Dendritic cells
 - (2) Lymphocytes
 - (3) B cells
 - (4) Haematopoietic stem cells
 - (5) Question not attempted

37. WHO published its position paper on new recommendations for human papillomavirus vaccination in December 2022. All of the following statements are true in this regard except
- (1) A one or two-dose schedule for girls aged 9-14 years
 - (2) A one or two-dose schedule for girls and women aged 15-20 years
 - (3) Two doses with a 6-month interval for women older than 21 years
 - (4) Two doses with a 12-month interval for women older than 21 years
 - (5) Question not attempted
38. The blood supply for the Supraclavicular flap arises from :
- (1) Perforating branches of Superior thyroid artery
 - (2) Perforating branches of Transverse cervical artery
 - (3) Perforating branches of the Suprascapular artery
 - (4) Perforating branches of the Thoracoacromial artery
 - (5) Question not attempted
39. Superficial parotidectomy surgery is also known as
- (1) Blair's operation
 - (2) Sistrunk's operation
 - (3) Patey's operation
 - (4) Criles operation
 - (5) Question not attempted
40. According to the American Joint Committee on Cancer Staging for supraglottic Laryngeal Cancer, the primary tumor (T3) is
- (1) Tumor limited to one subsite of supraglottis with normal vocal cord mobility
 - (2) Tumor invades mucosa of more than one adjacent subsites of supraglottis or glottis or region outside the supraglottis
 - (3) Tumor invades the medial wall of pyriform sinus
 - (4) Tumor limited to larynx with vocal cord fixation
 - (5) Question not attempted
41. Which of the following is a contraindication of the hemilaryngectomy ?
- (1) Extension to the supraglottic or inter arytenoid area
 - (2) Involvement of one cord
 - (3) A partial fixation of one cord
 - (4) Adequate pulmonary function
 - (5) Question not attempted
42. Which of the following is considered a low-risk salivary gland malignancy ?
- (1) Carcinoma ex-pleomorphic adenoma
 - (2) Adenoid cystic carcinoma
 - (3) Acinic cell carcinoma
 - (4) Squamous cell carcinoma
 - (5) Question not attempted
43. Montgomery tube is used in which surgery ?
- (1) Tracheal resection
 - (2) Nasopharyngeal surgery
 - (3) Maxillectomy
 - (4) Palatotomy
 - (5) Question not attempted

44. Which of the following head and neck cancer sites comes into the low-risk group for the clinically N0 neck ?
- (1) T1 Soft palate
 - (2) T1 Base of tongue
 - (3) T1 Nasopharynx
 - (4) T1 Oral tongue
 - (5) Question not attempted
45. The risk of developing a second primary tumor in Head & neck cancer is approximately
- (1) 1% to 1.5% per year
 - (2) 2.7% to 4% per year
 - (3) 5.7% to 6.5% per year
 - (4) 7% to 8% per year
 - (5) Question not attempted
46. In an ulcerated buccal carcinoma, tumor thickness is _____ in comparison to the depth of invasion.
- (1) less
 - (2) equal
 - (3) more
 - (4) based on MRI findings
 - (5) Question not attempted
47. Name the landmark trial that compared TORS vs radiation therapy for early oropharyngeal cancer.
- (1) DECIDE
 - (2) PARADIGM
 - (3) ORATOR
 - (4) DEESCALATE
 - (5) Question not attempted
48. Which of the following statements is not true regarding head and neck cancer ?
- (1) There are no capillary lymphatics in the epithelium.
 - (2) The lymphatic invasion can occur without tumor penetration to the lamina propria.
 - (3) The nasopharynx and pyriform sinus have the most profuse capillary lymphatic networks.
 - (4) The paranasal sinuses, middle ear, and true vocal cords have few or no capillary lymphatics.
 - (5) Question not attempted
49. Which of the following is incorrect about Genetic Alterations in non small cell Lung cancer ?
- (1) KRAS Mutation frequency 25%
 - (2) EGFR Mutation frequency 15%
 - (3) BRAF Mutation frequency 10% – 15%
 - (4) ALK rearrangement frequency 5% – 7%
 - (5) Question not attempted
50. Infiltration of all the following structures constitutes a T3 stage in the AJCC 8th edition staging for Lung cancer except
- (1) Chest wall
 - (2) Pericardium
 - (3) Phrenic nerve
 - (4) Recurrent Laryngeal nerve
 - (5) Question not attempted

51. All are true about Thymic tumors except
- (1) PET scan cannot distinguish between thymoma and thymic carcinoma
 - (2) Masaoka staging system is used
 - (3) Myasthenia Gravis is associated with Thymoma
 - (4) C kit mutation is seen in 2 – 10% of thymic carcinoma
 - (5) Question not attempted
52. Which of the following pairs of lymph node mapping, according to the International Association for the Study of Lung Cancer, is incorrect?
- (1) Station 7-Subcarinal
 - (2) Station 9-Pulmonary ligament
 - (3) Station 12-Interlobar
 - (4) Station 13-Segmental
 - (5) Question not attempted
53. OVHIPEC, a phase III randomized controlled trial investigating the role of HIPEC in advanced ovarian cancers. Choose the most appropriate option related to this trial:
- (1) Primary debulking surgery
 - (2) The rate of toxicity were observed higher in the HIPEC arm.
 - (3) Interval debulking surgery
 - (4) No effect on recurrence-free survival and Overall Survival (OS)
 - (5) Question not attempted
54. Which of the following statement is false about Hereditary ovarian carcinoma?
- (1) The breast-ovarian cancer syndrome accounts for approximately 90% of hereditary ovarian cancer.
 - (2) The hereditary non polyposis colorectal cancer syndrome accounts for 15% to 20% of all hereditary ovarian cancer.
 - (3) The lifetime risk of ovarian cancer is approximately 20% to 40% in BRCA1 mutation patient.
 - (4) The lifetime risk of ovarian cancer is approximately 10% to 20% in BRCA2 mutation carriers.
 - (5) Question not attempted
55. Which of the following statements about the Phase III epithelial ovarian cancer trial by Van Driel et al. is true?
- (1) This trial was conducted on newly diagnosed stage III chemoneive epithelial ovarian cancer.
 - (2) Interval cytoreduction with HIPEC was associated with longer recurrence-free survival than surgery alone.
 - (3) Grade 3 or 4 adverse events were not similar between the two arms.
 - (4) Overall survival rates were similar in both treatment arms.
 - (5) Question not attempted

56. The most chemo resistant type of ovarian cancer is –
- (1) Papillary serous
 - (2) Endometrioid
 - (3) Mucinous
 - (4) Clear cell
 - (5) Question not attempted
57. If a serous adenocarcinoma of the ovary involves one ovary but with capsule ruptured before surgery, it will be classified as :
- (1) Stage IB
 - (2) Stage IC1
 - (3) Stage IC2
 - (4) Stage IC3
 - (5) Question not attempted
58. Which of the following is the most active chemotherapy regimen (having improved disease free and overall survival) in randomized clinical trials in women with advanced or recurrent endometrial cancer ?
- (1) Doxorubicin plus Paclitaxel
 - (2) Cisplatin / Doxorubicin
 - (3) Cisplatin / Doxorubicin / Paclitaxel
 - (4) Ifosfamide plus Paclitaxel
 - (5) Question not attempted
59. In which scenario can we perform Sentinel Lymph Node Biopsy (SLNB) in vulvar cancer ?
- (1) Tumor size 3 cm
 - (2) Multifocal disease
 - (3) Stromal invasion 5 mm
 - (4) PNI
 - (5) Question not attempted
60. Which of the following statement is incorrect in invasive vulvar cancer ?
- (1) 30% to 50% of invasive vulvar carcinoma associated with HPV infection.
 - (2) HPV positive vulvar cancer are multifocal, seen in younger women.
 - (3) HPV negative tumor are generally unifocal, seen in older women, well differentiated.
 - (4) High incidence of p53 mutation in HPV positive tumors.
 - (5) Question not attempted
61. FALSE about genetic changes in Type I and Type II endometrial cancer –
- (1) Microsatellite instability common in Type II endometrial cancer.
 - (2) Her2 / neu amplification & BCL 2 over expression seen in Type II endometrial cancer.
 - (3) KRAS mutation, PTEN mutation, β -catenin mutation seen in Type I endometrial cancer.
 - (4) p53 mutation seen in Type II endometrial cancer.
 - (5) Question not attempted
62. OVA1 was the first blood test approved by the FDA for assisting with the triage of an adnexal mass. It is a multivariate index assay that evaluates the following five biomarkers except
- (1) CA125
 - (2) apolipoprotein A1
 - (3) HE4
 - (4) β 2-microglobulin
 - (5) Question not attempted

63. The World Health Organization (WHO) adopted the Global strategy for cervical cancer elimination in August 2020 to address global inequalities in preventing and curing cervical cancer worldwide. Which of the following statements is incorrect?
- (1) Vaccination of 90% of girls with human papilloma virus (HPV) vaccine by the age of 15 years.
 - (2) Screening of 70% of women by age 35 years and again by age 45 years
 - (3) Treatment of 90% of women with precancerous lesions.
 - (4) The goal is to meet the "90-70-90" targets by 2050.
 - (5) Question not attempted
64. Which patient is most suitable for the omission of RT after breast conservation surgery?
- (1) 38 years old with T1N0 ER -, PR -, Her2u -
 - (2) 72 years old with T1N0 ER + on Tamoxifen
 - (3) 50 years old with T1N0 ER + with DCIS
 - (4) 65 years old with T2N1 ER +, PR +, Her2u -
 - (5) Question not attempted
65. All of the following are correct about NSABP B-17 trial, role of Radiotherapy (RT) after Lumpectomy in patients with DCIS except
- (1) Use of RT resulted in 50% risk reduction in ipsilateral local recurrence.
 - (2) Improve overall survival
 - (3) More local recurrence in light & intermediate grade DCIS.
 - (4) Age is important factor for recurrence.
 - (5) Question not attempted
66. Breast cancer and Pregnancy FALSE statement is
- (1) Breast cancer is one of the most commonly diagnosed malignancies during pregnancy.
 - (2) Seen in 1 : 1000 pregnancies
 - (3) Seen in 1 : 3000 pregnancies
 - (4) Breast surgery can be safely performed during any trimester of pregnancy.
 - (5) Question not attempted
67. TRUE about breast carcinoma in men :
- (1) Estrogen receptor positive
 - (2) Gynecomastia is not a risk factor
 - (3) Seen in younger males
 - (4) Radiotherapy contraindicated due to close proximity to chest wall
 - (5) Question not attempted
68. Relative risk of more than 4-fold increase in breast cancer includes following except :
- (1) Radiation exposure before age of 30
 - (2) CHEK 2 Mutation
 - (3) BRCA 1 and 2 mutations
 - (4) Atypical hyperplasia
 - (5) Question not attempted
69. Incorrect statement with regard to family history of breast cancer amongst the following is -
- (1) 5% to 10% of women who develop breast cancer have a true hereditary predisposition.
 - (2) Women with BRCA2 mutations have a higher incidence of higher-grade tumors ("triple-negative"), breast cancers than sporadic cancers.
 - (3) The presence of a BRCA1 or BRCA2 mutation may be suggested by the family history on either the maternal or paternal side of the family.
 - (4) By contrast, women in families with a known BRCA mutation but who test negative for the mutation are not at increased risk and do not require special surveillance.
 - (5) Question not attempted

70. Bilateral prophylactic mastectomy reduces breast cancer mortality by
 (1) 11 – 40% (2) 41 – 60%
 (3) 61 – 80% (4) 81 – 100%
 (5) Question not attempted
71. Regarding BRCA1 and BRCA2 gene mutations, which of the following statements is untrue?
 (1) The estimated lifetime risk of breast cancer development in mutation carriers ranges from 26% to 85%.
 (2) The risk of ovarian cancer ranges from 16% to 63% and 10% to 27% in carriers of BRCA1 and BRCA2, respectively.
 (3) More than 700 mutations of BRCA1 and 300 mutations of BRCA2 have been described.
 (4) The phenotype of BRCA2-associated cancers significantly differs from that of sporadic cancers.
 (5) Question not attempted
72. DeCOG-SLT is a phase III prospective randomized trial of malignant melanoma. Which of the following statements is correct?
 (1) Cutaneous melanoma of the trunk and extremities who were randomly assigned (1:1) to undergo CLND or observation
 (2) Distant metastasis-free survival (DMFS) was analysed as the primary endpoint.
 (3) No significant treatment-related difference was seen in the 5-year DMFS between the observation and CLND arms.
 (4) Results confirm that immediate CLND in SLN-positive patients is superior to observation.
 (5) Question not attempted
73. A 37 year old man presents to your clinic with history of a pigmented skin lesion on his back. His dermatologist performed Biopsy demonstrating a 1.4 mm thick melanoma. He has no palpable axillary or inguinal adenopathy, next step in management is:
 (1) Staging PET/CT scan.
 (2) Wide local excision with 1 cm margin.
 (3) Wide local excision with 3 cm margin and sentinel node biopsy.
 (4) Wide local with 2 cm margin and sentinel node biopsy.
 (5) Question not attempted
74. Mohs micrographic surgery is most appropriate for
 (1) Merkle cell carcinoma
 (2) Large cutaneous melanoma
 (3) SCC with nodal metastasis
 (4) Recurrent BCC over the face
 (5) Question not attempted
75. What is the recommended margin of resection in squamous cell skin cancer for low-risk lesions >2 cm diameter?
 (1) 2 mm
 (2) 4 mm
 (3) 6 mm
 (4) 8 mm
 (5) Question not attempted
76. Which of the following is the best predictor of metastatic risk in primary melanoma?
 (1) Breslow thickness
 (2) Ulceration
 (3) Age
 (4) Site of lesion
 (5) Question not attempted

77. Which of the following sarcoma subtype have incorrect clonal cytogenetic abnormality ?
- (1) Synovial sarcoma and t(X:18) (p11;q11)
 - (2) Ewing sarcoma and t(11:22) (q24;q12)
 - (3) Alveolar rhabdomyosarcoma and t(2:13) q(35 : q14)
 - (4) Desmoplastic small round cell tumor and t(17:22) (q22;q13)
 - (5) Question not attempted
78. Which is false regarding Ewing's sarcoma ?
- (1) It is second most common tumor of bone affecting children and adolescents.
 - (2) It involves both diaphyses and metaphyses.
 - (3) At diagnosis 35-40% are metastatic.
 - (4) Fusion between FET-ETS gene is pathognomic of Ewing's sarcoma.
 - (5) Question not attempted
79. Tikhoff-Linberg resection is done for osteosarcoma of :
- (1) Femur (2) Pelvis
 - (3) Scapula (4) Humerus
 - (5) Question not attempted
80. Which is the incorrect order of sequences in the overarching priorities in caring for patients with sarcomas of bone ?
- (1) Cosmesis > Limb length equalization
 - (2) Life > limb
 - (3) Limb length equalization > Cosmesis
 - (4) Limb function > Limb length equalization
 - (5) Question not attempted
81. All of the following are poor prognostic factor in adult ALL (Acute Lymphoblastic Leukemia) except
- (1) Philadelphia chromosome t(9:22)
 - (2) t(4:11)
 - (3) Age > 50 years
 - (4) Diploid chromosome on Karyotyping
 - (5) Question not attempted
82. Regarding Hodgkin lymphoma, which of the following is not true ?
- (1) Classical Hodgkin lymphoma (CHL), accounts for 90% of all cases
 - (2) Stage II involves multiple nodal regions limited to both sides of the diaphragm
 - (3) Most cases of CHL are diagnosed in adults between the ages of 20 years to 34 years.
 - (4) The Lugano staging classification is used for HL staging
 - (5) Question not attempted
83. All are poor risk factors for AML except
- (1) Presence of FLT-3 ITD Mutation
 - (2) Presence of complex cytogenetic
 - (3) Deleting 5q abnormality
 - (4) Core binding factor mutations
 - (5) Question not attempted
84. The tendency of colonic carcinoma to metastasize is best assessed by
- (1) Size of tumor
 - (2) CEA levels
 - (3) Depth of Penetration of Bowel wall
 - (4) Proportion of bowel circumference involved
 - (5) Question not attempted

85. The contrast-enhanced axial computed tomography image demonstrates an annular soft tissue lesion (arrows) in the duodenum, resulting in circumferential luminal narrowing and wall thickening. A lateral image from a subsequent upper gastrointestinal series shows an annular "apple-core" lesion, resulting in advanced narrowing of the duodenal lumen. What is the most likely diagnosis based on the imaging features ?
- (1) Adenocarcinoma
 - (2) Carcinoid tumor
 - (3) Lymphoma
 - (4) Sarcoma
 - (5) Question not attempted
86. All of the following are criteria for trans-anal excision of Ca Rectum except :
- (1) < 30% circumference of bowel involvement
 - (2) < 3 cm in size
 - (3) T1 and T2
 - (4) Within 8 cm of anal large
 - (5) Question not attempted
87. According to the American Joint Committee on Cancer, the staging system for gallbladder cancer stage T2b is
- (1) Tumor invades muscular layer
 - (2) Tumor invades the perimuscular connective tissue on the peritoneal side without involvement of the serosa (visceral peritoneum)
 - (3) Tumor invades the perimuscular connective tissue on the hepatic side, with no extension into the liver
 - (4) Tumor invades lamina propria
 - (5) Question not attempted
88. Which of the following is not a criteria for unresectability of hilar cholangiocarcinoma ?
- (1) Portal hypertension
 - (2) Main portal vein involvement
 - (3) N2 disease
 - (4) Lobar atrophy with ipsilateral portal vein involvement
 - (5) Question not attempted
89. Portal hypertension can be indirectly assessed clinically by the presence of the following features : all except
- (1) Splenomegaly
 - (2) Esophagogastric varices
 - (3) Thrombocytopenia
 - (4) Leukopenia
 - (5) Question not attempted
90. Which of the following abnormalities is both a paraneoplastic syndrome associated with HCC and may also be caused by end-stage liver failure ?
- (1) Erythrocytosis
 - (2) Hypoglycemia
 - (3) Hypercalcemia
 - (4) Hypercholesterolemia
 - (5) Question not attempted
91. Which of the following statement about GIST is true ?
- (1) Half of GIST tumors demonstrate mutations in either KIT or PDGFRA, whereas half are WT
 - (2) Most GIST cases arise from small bowel, followed by stomach and esophagus
 - (3) Succinate dehydrogenase (SDH)-deficient GISTs usually occur in younger females
 - (4) Small GISTs can be followed <4 cm in size
 - (5) Question not attempted

92. Which of the following statements is not true about gastric cancer management ?
- (1) Minimally invasive approaches may be considered for selected cases, provided that the surgeon has experience.
 - (2) Minimally invasive approaches are generally not recommended for T4b or N2 bulky gastric cancer.
 - (3) The safety of laparoscopic total gastrectomy with lymphadenectomy by experienced surgeons for early-stage gastric cancer was comparable to that of an open procedure.
 - (4) The CYTO-CHIP study confirmed the safety of the minimally invasive gastrectomy in early-stage gastric cancer.
 - (5) Question not attempted
93. The following are true statements of Transthoracic Esophagectomy over Trans hiatal Esophagectomy except
- (1) Overall mortality is same
 - (2) Loco-regional recurrence and Distant recurrence are same
 - (3) Less anastomotic leak in TTE
 - (4) Vocal cord paralysis in m/c in transthoracic type
 - (5) Question not attempted
94. Which of the following statements about Perioperative Chemotherapy or Preoperative Chemoradiotherapy in Oesophageal Cancer (ESOPEC trial) is not true ?
- (1) Resectable esophageal adenocarcinoma to receive perioperative chemotherapy with FLOT plus surgery or preoperative chemoradiotherapy plus surgery.
 - (2) The primary endpoint was progression-free survival.
 - (3) Progression-free survival at 3 years was 51.6% (95% CI, 44.3 to 58.4) in the FLOT group and 35.0% (95% CI, 28.4 to 41.7) in the preoperative-chemoradiotherapy group
 - (4) Perioperative chemotherapy with FLOT led to improved survival among patients with resectable esophageal adenocarcinoma as compared with preoperative chemoradiotherapy.
 - (5) Question not attempted
95. All of the following are included in the MSKCC Prognostic System of Metastatic Renal Cell Carcinoma except
- (1) High lactate dehydrogenase
 - (2) Low calcium level
 - (3) Low haemoglobin
 - (4) Low Karnofsky performance status
 - (5) Question not attempted

96. Wrong statement in Muscle invasive Bladder Cancer

- (1) Radical Cystectomy is the standard of care in all patients with cancer involving muscularis propria of Bladder.
- (2) Urethra may be spared in men and women if urinary diversion with neobladder is planned.
- (3) Compared to colon and Ileum, jejunum is the preferred conduit as electrolyte disturbances are not significant.
- (4) Outcomes are comparable with both open and minimally invasive surgery.
- (5) Question not attempted

97. According to the NEVES classification of IVC thrombus in Renal cell carcinoma, what is stage 2 among the following?

- (1) Thrombus in Renal vein
- (2) Thrombus in IVC < 2 cm above Renal vein
- (3) Thrombus in IVC > 2 cm above Renal vein and below Hepatic veins
- (4) Thrombus above Hepatic vein and below Diaphragm
- (5) Question not attempted

98. Which of the following is not a complication of the radical cystoprostatectomy with ileal conduit?

- (1) Acidosis
- (2) Postoperative hydronephrosis
- (3) Postoperative pyelonephritis
- (4) Alkalosis
- (5) Question not attempted

99. PAX 8 is an IHC diagnostic marker for all the following tumors except

- (1) RCC
- (2) Thyroid
- (3) HCC
- (4) Ovarian
- (5) Question not attempted

100. Management of patients with CUP – Wrong statement is

- (1) Those presenting with diffuse Peritoneal carcinomatosis without a clear primary should be considered for Surgical cytoreduction followed by Chemotherapy.
- (2) Breast MRI can identify occult breast malignancy in patients with axillary lymphadenopathy with no tumor in clinical examination or Mammography.
- (3) Immunotherapy is now approved by FDA for the treatment of CUP.
- (4) Men with Adenocarcinoma of unknown primary should have their PSA measured.
- (5) Question not attempted

101. Which of the following pairs of the IHC markers and associated tumors is not correctly matched?

- (1) TTF1 – Lung adenocarcinoma
- (2) GATA3 – Prostate adenocarcinoma
- (3) PAX8 – Thyroid cancer
- (4) Calretinin – Medullary thyroid cancer
- (5) Question not attempted

102. PRETEXT classification is used for which cancer ?
- (1) HCC
 - (2) Renal cell carcinoma
 - (3) Wilms tumor
 - (4) Hepatoblastoma
 - (5) Question not attempted
103. What is the most common age of the diagnosis of the Wilms tumor in children ?
- (1) 1-5 years
 - (2) 5-10 years
 - (3) 10-15 years
 - (4) < 1 year
 - (5) Question not attempted
104. Which one of the following Interventions for Fatigue does not have Strong Evidence Supporting Effectiveness ?
- (1) Exercise
 - (2) Reiki, aromatherapy, distraction-virtual reality immersion
 - (3) Psychoeducational/ psychosocial support
 - (4) Structured rehabilitation
 - (5) Question not attempted
105. What will the OMAS (oral mucositis assessment index) be if there is no severe erythema of less than 1 cm³ over the lateral tongue and floor of the mouth ?
- (1) 2
 - (2) 3
 - (3) 4
 - (4) 5
 - (5) Question not attempted
106. Which one of the following antiemetic drugs has the highest therapeutic index ?
- (1) Aprepitant
 - (2) Prochlorperazine
 - (3) Nabilone
 - (4) Dronabinol
 - (5) Question not attempted
107. Typical shaggy moth eaten appearance of Esophagogram seen in :
- (1) Caustic Burn of esophagus
 - (2) Esophageal candidiasis
 - (3) Esophageal bacterial infection
 - (4) Esophageal bacterio fungal infection
 - (5) Question not attempted
108. The most common organism isolated from central line infections is
- (1) Staphylococcus aureus
 - (2) Pseudomonas aeruginosa
 - (3) Candida
 - (4) Klebsiella
 - (5) Question not attempted
109. Early in the course of neutropenia, during the first week, which kind of organisms are most commonly found ?
- (1) Gram-positive and gram-negative bacteria
 - (2) Fungi (candida species)
 - (3) Molds (Aspergillus)
 - (4) Carbapenemase-producing Enterobacteriaceae
 - (5) Question not attempted

110. Which of the following laboratory abnormalities are associated with tumor lysis syndrome ?
- (1) Hypokalemia + Hypocalcemia
 - (2) Hyperkalemia + Hypercalcemia
 - (3) Hypocalcemia + Hyperuricemia
 - (4) Hypomagnesemia + Hypophosphatemia
 - (5) Question not attempted
111. MNOP algorithm for managing malignant Spinal cord compression, includes all except
- (1) Mechanical
 - (2) Nutritional
 - (3) Oncologic
 - (4) Preferred Treatment
 - (5) Question not attempted
112. The most common cause of superior vena cava syndrome is
- (1) Lung cancer
 - (2) Lymphoma
 - (3) Other malignancies (primary or metastatic)
 - (4) Non-neoplastic
 - (5) Question not attempted
113. RANO Criteria is used for response assessment of which tumor ?
- (1) Glioblastoma multiforme
 - (2) Spinal cord tumors
 - (3) Neuroblastoma
 - (4) Malignant melanoma
 - (5) Question not attempted
114. The most common primary brain tumor is
- (1) Meningioma
 - (2) Glioblastoma
 - (3) Pituitary tumor
 - (4) Nerve sheath tumors
 - (5) Question not attempted
115. According to the 2021 WHO criteria for the diagnosis of Lung Neuroendocrine Tumors, which of the following is true regarding the diagnostic criteria for Typical and Atypical Carcinoid tumors ?
- (1) Typical carcinoid is a tumor ≥ 5 mm with carcinoid morphology and < 2 mitoses/ 2 mm^2 , lacking necrosis
 - (2) Atypical carcinoid is a tumor with carcinoid morphology and > 10 mitoses/ 2 mm^2 , and /or necrosis (often punctate) or both
 - (3) Typical carcinoid is a tumor ≥ 2 mm with carcinoid morphology and > 5 mitoses/ 2 mm^2 , lacking necrosis
 - (4) Atypical carcinoid is a tumor with carcinoid morphology and < 2 mitoses/ 2 mm^2 , and/or necrosis (often punctate) or both
 - (5) Question not attempted
116. As per the American Association of Endocrine Surgeons (AAES) guidelines, which of the following is not the indication for parathyroidectomy in patients with hypercalcemia associated with Primary hyperparathyroidism (PHPT) ?
- (1) Osteoporosis or vertebral compression fracture documented by imaging studies
 - (2) Clinically documented nephrocalcinosis
 - (3) 24 – hour urine calcium > 300 mg/dl
 - (4) Serum calcium > 1 mg/dl above the upper limit of normal
 - (5) Question not attempted

117. Which is the most common Pancreatic neuroendocrine tumor associated with MEN 1 syndrome ?

- (1) Insulinoma
- (2) Gastrinoma
- (3) Glucagonoma
- (4) VIPoma
- (5) Question not attempted

118. Medullary cell carcinoma arises from

- (1) Follicular cells
- (2) Parafollicular C cells
- (3) Stromal cells
- (4) Lymphocytes
- (5) Question not attempted

119. "Do no harm" concept was emphasized in which of the following ethical principles ?

- (1) Justice
- (2) Autonomy
- (3) Beneficence
- (4) Non-maleficence
- (5) Question not attempted

120. Which of the following is the wrong expansion of the S-P-I-K-E-S protocol for giving news and setting up goals of care conversation ?

- (1) S-Setting
- (2) P-Politeness
- (3) I-Invitation
- (4) K-Knowledge
- (5) Question not attempted

121. Regarding the usage of opioid analgesic, morphine for pain control in cancer patients, which of the following is true ?

- (1) Its half-life is 2 to 4 hours
- (2) Time to reach maximum concentration is 30 minutes for intravenous route.
- (3) Plasma concentration reaches a steady state in 3 half-lives.
- (4) Time to reach maximum concentration is 15 minutes for oral route.
- (5) Question not attempted

122. Which one of the following is not a co-analgesic used in cancer pain ?

- (1) Amitryptaline
- (2) Dexamethasone
- (3) Cannabinoids
- (4) Choline magnesium trisalicylate
- (5) Question not attempted

123. Which of the following is not recommended for cancer patients throughout survivorship ?

- (1) Emphasize vegetables : 3-5 Servings Daily
- (2) Choose whole grains : Oats, bulgur, whole wheat, high-fiber breads and cereals
- (3) Emphasize sweets : 2-4 Servings daily
- (4) Avoid, when possible, processed meats
- (5) Question not attempted

124. All are domains of cancer survivorship except

- (1) Psychosocial effects
- (2) Health promotions
- (3) Physical effects
- (4) None of these
- (5) Question not attempted

125. All of the following are risk reduction strategies in BRCA mutated individuals except

- (1) Prophylactic B/L Salpingectomy
- (2) Prophylactic B/L Salpingo-oophorectomy
- (3) Prophylactic B/L Oophorectomy
- (4) Prophylactic B/L Mastectomy
- (5) Question not attempted

126. Which of the following statement about HPV vaccine Gardasil is correct?

- (1) It is a quadrivalent vaccine containing virus-like particle (VLPs) from four different types of HPV.
- (2) Protects from all HPV causing cervical cancer.
- (3) Is recommended only for sexually active women.
- (4) Is recommended for treating cervical cancer.
- (5) Question not attempted

127. The increased risk of malignancy associated with obesity is strongest in:

- (1) Breast cancer
- (2) Endometrial cancer
- (3) Gastric cancer
- (4) Esophageal cancer
- (5) Question not attempted

128. The following is TRUE about Ultraviolet (UV) light:

- (1) UVC light is more damaging to DNA than UVA and UVB light.
- (2) UVC light having wave length of 320 to 400 nm
- (3) Risk of Melanoma appears to be linked to cumulative lifetime exposure to UV light.
- (4) Living organism are mostly exposed to UVC irradiation than UVA and UVB irradiation.
- (5) Question not attempted

129. Which of the following statement is FALSE in Lynch syndrome?

- (1) The Lynch syndrome is primarily associated with a high risk for colon and endometrial cancer.
- (2) Two to three percent of women with endometrial cancer have lynch syndrome.
- (3) The life time risk of endometrial cancer for women with lynch syndrome has been reported as 33% to 40%.
- (4) Endometrial cancer risk highest for women with PMS2 mutation or EPCAM mutations.
- (5) Question not attempted

130. Anthracyclines inhibit:

- (1) Top 1
- (2) Top 2A
- (3) Top 3A
- (4) Top 3B
- (5) Question not attempted

131. What is the leading cause of death in multiple endocrinal neoplasia type 1 (MEN1) ?
- (1) Heart attack
 - (2) Pituitary adenoma
 - (3) Parathyroid adenoma
 - (4) Malignant pancreatic NET
 - (5) Question not attempted
132. Which one of the following is not a typical histopathological feature of the basal-like molecular subtype of breast cancer ?
- (1) ER-negative (2) PR-negative
 - (3) Her2-positive (4) Her2-negative
 - (5) Question not attempted
133. Which of the following components of Radiotherapy are used for superficial radiation ?
- (1) Electron (2) Neutron
 - (3) UV rays (4) Gamma rays
 - (5) Question not attempted
134. Which one of the following pairs is correctly matched ?
- (1) Aerobic glycolysis – Sustaining proliferative signalling
 - (2) Inhibitors of oncogenic kinases – Evading growth suppressors
 - (3) Telomerase inhibitors – Enabling replicative immortality
 - (4) PARP inhibitors inducing angiogenesis
 - (5) Question not attempted
135. Which malignancies are the exception to the fact that cancer incidence increase with age ?
- (1) Leukaemia and Sarcoma
 - (2) Lymphoma and Sarcoma
 - (3) Retinoblastoma and Lymphoma
 - (4) Carcinoma and Retinoblastoma
 - (5) Question not attempted
136. The DNA damage checkpoints are located in following phase of the cell cycle except
- (1) G₁/S phase
 - (2) G₂/M phase
 - (3) S phase
 - (4) M phase
 - (5) Question not attempted
137. Which of the following is the vaccine that can be used with IL-2 in patients with melanoma ?
- (1) Talimogene laherparepvec
 - (2) Gp100
 - (3) GVAX
 - (4) Sipuleucel-T
 - (5) Question not attempted
138. Cancer immunosurveillance concept was put forward by
- (1) Schreiber et al
 - (2) Burnet and Thomas
 - (3) Paul Ehrlich
 - (4) zer Heusen
 - (5) Question not attempted

139. Identify the incorrect pair of the antibody substem indication of the species on which the immunoglobulin sequence is based

- (1) -o- : Mouse
- (2) -xi- : Chimeric
- (3) -zu- : Humanized
- (4) -u- : Chimeric / Humanized
- (5) Question not attempted

140. Which is the most common antibody isotype used for therapy in oncology ?

- (1) IgM (2) IgA
- (3) IgG (4) IgE
- (5) Question not attempted

141. Sensitivity of a test is defined as

- (1) Proportion of individuals with a positive screening test who have the disease.
- (2) Proportion of persons designated negative by the screening test among all individuals who do not have the disease.
- (3) Proportion of persons designated positive by the screening test among all individuals who have the disease.
- (4) Proportion of persons designated negative by the screening test among all individuals who have the disease.
- (5) Question not attempted

142. In the National Lung Screening Trial (NLST), what was the percentage of relative reduction in mortality with low dose computerized tomography ?

- (1) 7% (2) 15%
- (3) 20% (4) 30%
- (5) Question not attempted

143. Which of the following is not a recommendation for women at average risk for cancer screening ?

- (1) Women aged 21 to 29 years should receive cytology screening every 3 years.
- (2) Screening for cervical cancer should begin at 9 years of age.
- (3) Women who have undergone a total hysterectomy for noncancerous conditions do not need to undergo cervical cancer screening.
- (4) For women aged 30 to 65 years, the preferred approach is to be screened every 5 years with both HPV testing and cytology.
- (5) Question not attempted

144. Which of the following recommendations about MRI screening of Breast by American Cancer Society is incorrect ?

- (1) Women > 20% life time risk of Breast cancer screen with MRI plus mammography annually.
- (2) Women 15% – 20% life time risk of Breast cancer : Discuss option of MRI plus mammography annually.
- (3) Women < 15% life time risk of Breast cancer : Do not screen annually with MRI.
- (4) Women < 15% life time risk of Breast cancer : Discuss MRI screening annually.
- (5) Question not attempted

145. Which of the following are the non-self-protein antigens that are involved in endogenous pathway of antigen processing and presentation ?

- (1) Tumor antigens
- (2) Viral antigens
- (3) Lysosomal antigens
- (4) Proteosome antigens
- (5) Question not attempted

146. All of the following are correct about abscopal effect of radiation except

- (1) Attributed to the activation of antigen and cytokine release.
- (2) Seen more frequently with lower losses and greater fractions.
- (3) Activation of tumor specific T-cells.
- (4) Double stranded breaks in DNA in irradiated cells.
- (5) Question not attempted

147. Which one of the following pairs of the major hormonal agents and their standard dosage is not correctly matched ?

- (1) Tamoxifen – 20 mg
- (2) Anastrozole – 1 mg
- (3) Letrozole – 2.5 dosages
- (4) Fulvestrant – 25 mg
- (5) Question not attempted

148. Which of the following statements describes the DNA damage repair process associated with ionizing radiation is incorrect ?

- (1) Double stranded breaks of the DNA are thought to represent the lethal event.
- (2) In mammalian cells, choice of repair can be biased by phase of the cell cycle and by abundance of repetitive DNA.
- (3) Double stranded breaks are rejoined in cells within 2 hours after exposure, the process can continue for 24 hours.
- (4) NHEJ predominate in the late S to G₂ phase of cell cycle.
- (5) Question not attempted

149. All are antimetabolite except

- (1) Capecitabine
- (2) TAS-102
- (3) FUdR
- (4) Topotecan
- (5) Question not attempted

150. Higher intake of alcohol has been linked to increase all-cause mortality rates in all of the following malignancies except

- (1) Carcinoma larynx
- (2) Hepatocellular carcinoma
- (3) Head and neck carcinoma
- (4) Thyroid carcinoma
- (5) Question not attempted

