South Egypt Cancer Institute – MCQ

Select the best single answer:

1- Hyperplasia is characterized by all of the following except:
   a- the hormonal type is the commonest example
   b- sometimes precancerous
   c- always irreversible
   d- may lead to organ hyperfunction
   e- monotony of hyperplastic cells

2- Atrophy is characterized by all of the following except:
   a- decrease in size and number of cells
   b- common in brain of old age
   c- may be congenital
   d- may result from a disuse of an organ

3- Hypertrophy is:
   a- associated with increased cell number
   b- rare in the heart
   c- often predispose to malignancy
   d- all of the above
   e- non of the above

4- Hypertrophy is characterized by all of the following except:
   a- not always pathological
   b- usually results in an increase of the blood supply of the tissue
   c- common in the heart
   d- precancerous
   e- may be associated with hyperplasia

5- Hyperchromatism is seen in:
   a- degenerated cells
   b- necrotic cells
   c- signet-ring cells
   d- dysplastic cells

6- Squamous metaplasia may result from:
   a- bilharziasis
   b- smoking
   c- both
   d- neither
7- Metaplasia is:
   a- common in the skin          b- only seen in epithelial tissues  
   c- both                        d- neither

8- As a physician, you should be concerned about a surgical pathology report that describes metaplasia in a biopsy because:
   a- this change indicates irreversible tissue damage  
   b- it may be due to irritant that can be avoided  
   c- the patient will probably develop cancer  
   d- It may be due to viral infection that can be treated  
   e- Any of the above

9- Hyperplastic tissues:
   a- show marked cellular pleomorphism  
   b- may become neoplastic  
   c- are always irreversible lesions  
   d- all of the above  
   e- none of the above

10- A paraplegic patient aged 30 yrs., he is expected to have:
    a- atrophy of the calf muscles  
    b- hypertrophy of the calf muscles  
    c- both  
    d- neither

11- Neoplasia is characterized by:
    a- has no stimulus          b- has no useful function  
    c- not coordinated           d- all of the above  
    e- none of the above

12- All these benign tumours are capsulated except:
    a- lipoma                  b- chondroma  
    c- angioma                 d- neurofibroma  
    e- fibroadenoma

13- Malignant tumour of mesenchymal tissues is called:
    a- adenocarcinoma         b- sarcoma  
    c- mucoid carcinoma       d- squamous cell  
    carcinoma
14- A malignant ulcer is characterized by:
   a- necrotic floor
   b- raised everted edge
   c- indurated base
   d- all of the above
   e- none of the above

15- The edge of a malignant ulcer is:
   a- undermined
   b- rolled over
   c- punched out
   d- everted
   e- sloping

16- Precancerous lesions include:
   a- papilloma of the tongue
   b- adenoma of the thyroid
   c- bilharziasis of the urinary bladder
   d- all of the above
   e- none of the above

17- The nuclei of malignant cells show:
   a- variability in size
   b- hyperchromatism
   c- variability in shape
   d- abnormal mitosis
   e- all of the above

18- Transcoelomic spread occurs in carcinoma of:
   a- breast
   b- tongue
   c- skin
   d- stomach
   e- none of the above

19- Squamous cell carcinoma occurs as a primary tumour in the following sites except:
   a- skin
   b- gall bladder
   c- urinary bladder
   d- tongue
   e- liver

20- The following tumours give distant metastasis except:
   a- basal cell carcinoma
   b- squamous cell carcinoma
   c- adenocarcinoma
   d- scirrhous carcinoma
   e- encephaloid carcinoma

21- Which of the following is not a benign tumour:
   a- adenoma
   b- fibroma
   c- chondroma
   d- papilloma
   e- haematoma
22- **Osteoclastoma is:**
   a- benign tumour of bone   b- malignant tumour of bone
   c- locally malignant tumour of bone
   d- metastatic tumour of bone
   e- non of the above

23- **A benign tumour usually shows:**
   a- lymphatic spread   b- blood spread
   c- many mitotic figures
d- mature cell population
e- extensive necrosis

24- **Neoplasia means:**
   a- disturbance in cellular growth
   b- disturbance in cellular differentiation
   c- disturbance in both cellular growth and differentiation
e- all of the above

25- **The most common malignant tumour of the liver:**
   a- cholangiocarcinoma   b- hepatocellular carcinoma
   c- metastatic carcinoma
d- sarcoma

26- **Carcinoma in situ is:**
   a- carcinoma of unknown origin   b- occult carcinoma
   c- carcinoma with bad prognosis
d- non invasive carcinoma
e- carcinoma occurs in certain sites.

27- **Locally malignant tumours include all except:**
   a-adamantinoma   b- osteoclastoma
   c- basal cell carcinoma
d- mixed salivary gland tumour
e- osteosarcoma

28- **All tumours metastasizing in bone result in bone destruction except:**
   a- thyroid gland carcinoma   b- breast carcinoma
   c- prostatic carcinoma
d- renal cell carcinoma
e- bronchogenic carcinoma
29- An occult carcinoma is:
   a- in situ carcinoma                                          b- locally malignant carcinoma
   c- clinically undetectable primary carcinoma, manifested by metastasis
   d- all of the above                                          e- none of the above

30- A male patient aged 63 years with multiple osteolytic lesions in the skull, he is expected to have:
   a- osteomalacia                                               b- miliary tuberculosis
   c- prostatic carcinoma                                        d- melanoma
   e- none of the above

31- Basal cell carcinoma spreads by:
   a- transcoelomic                                               b- blood
   c- lymph                                                        d- all of the above
   e- non of the above

32- Osteoclastoma is:
   a- benign tumour of bone                                       b- malignant tumour of bone
   c- locally malignat tumour of bone                              d- metastatic tumour of bone
   e- none of the above

33- A locally malignant tumour includes:
   a- bronchial adenoma                                            b- rodent ulcer
   c- adamantinoma                                                  d- desmoid tumour
   e- all of the above

34- A benign tumour usually shows:
   a- stromal invasion                                             b- mature cell
   population                                                    c- lymphatic spread
   d- many mitotic figures                                         e- extensive necrosis

35- Teratoma areise from:
   a- multipotent cells                                            b- unipotent cells
   c- totipotent cells                                             d- all of the above
   e- none of the above

36- The following tumours give distant metastasis except:
   a- squamous cell carcinoma                                      b- basal cell carcinoma
   c- adenocarcinoma                                               d- scirrhous carcinoma
   e- encephaloid carcinoma
37- **Krukenberg tumour:**
   a- primary tumour of the ovary  
   b- associated with hydrothorax  
   c- secondary tumour reach the ovary by the blood stream  
   d- secondary tumour that reach the ovary by transcoelomic spread  
   e- all of the above

38- **Krukenberg tumour:**
   a- usually bilateral ovarian tumour  
   b- associated with malignant ascitis  
   c- secondary tumour that reach the ovary by transcoelomic spread  
   d- reach the ovaries from the GIT  
   e- all of the above

39- **The following are examples of hereditary cancer except:**
   a- breast carcinoma  
   b- colon carcinoma  
   c- Wilm's tumour  
   d- osteogenic carcinoma  
   e- retinoblastoma

40- **Viruses that have been associated with malignancy include all of the following except:**
   a- rhinovirus  
   b- hepatitis B virus  
   c- human immunodeficiency  
   d- human papilloma virus  
   e- human T-lymphocyte virus, type I

41- **Tumour cachexia is related to all except:**
   a- depression leading to anorexia  
   b- altered taste sensation  
   c- tumour necrosis factor  
   d- altered deglutition  
   e- None of the above

42- **Hyperplasia is characterized by all of the following except:**
   a- the hormonal type is the commonest example  
   b- sometimes precancerous  
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   b- it may be due to irritant that can be avoided
   c- the patient will probably develop cancer
   d- It may be due to viral infection that can be treated
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46- All these benign tumours are capsulated except:
   a- lipoma  b- chondroma
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   a- undermined  b- rolled over
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   b- colon carcinoma
   c- Wilm's tumour
   d- osteogenic carcinoma
   e- retinoblastoma

54- **Anaplastic tumour is a tumour in which the tissue is:**
   a- well differentiated
   b- moderately differentiated
   c- poorly differentiated
   d- undifferentiated

55- **Krukenberg tumour is:**
   a- primary tumour of the ovary
   b- associated with hydrothorax
   c- secondary tumour reach the ovary by the blood stream
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60- All are true for gatekeeper genes except:
   1- maintain the integrity of the genome by repairing DNA damage
   2- inhibit the proliferation, or promote the death of cells with damaged DNA
   3- are exemplified by the p35 gene
   4- are mutated in familial neuroblastoma
   5- are exemplified by the BRCA1 gene

61- Telomeres
   a- are situated in the centromeric regions of chromosomes
   b- lengthen with each cell division
   c- are non-coding tandemly repetitive sequences of DNA
   d- are replicated by the enzyme telomerase
   e- are prematurely shortened in progeria

62- Ionizing radiation
   A- increases DNA synthesis
   B- increases H2O2 in the tissues
   C- breaks disulphide bonds
   D- causes atrophy of the seminiferous tubules of the testis

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   a- rhinovirus                        b- hepatitis B virus
   c- human immunodeficiency virus      d- human papilloma
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67- **Fourth event in this series?**
   A- budding of C-type particle from cell surface
   B- replication
   C- RNA virus enters cell
   D- Synthesis of DNA provirus
   E- Synthesis of reverse transcriptase

68- **Tetraploidy in a tumour can only be recognized with certainly by a chromosome count on a dividing cell, but the next best indicator is a nucleus that?**
   A- contains four times the normal amount of DNA
   B- contains twice the normal amount of DNA
   C- has two nucleoli
   D- is four times the normal diameter
   E- is twice the normal diameter

69- **All are true for cellular proto-oncogenes except:**
   A- may be converted to cellular oncogenes by placement next to promoter genes
   B- are responsible for the production of cellular constituents of enzymes
C-  the cellular proto-oncogenes responsible for chronic myeloid leukemia is the same as that for Burkitt's lymphoma
D-  contain similar genetic structures to viral oncogenes
E-  may be converted into cellular oncogenes by gene amplification

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   a- in situ carcinoma
   b- locally malignant carcinoma
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d- all of the above
e- none of the above

84- NOT true of retinoblastoma:
A- Cells small, often arranged in rosettes
1- Five year survival under 15%
2- Occurs in infants
3- Often bilateral
4- Often familial

85- Lymphoma of the stomach:
a- may be primary or secondary in the stomach
b- has a better prognosis than carcinoma of the stomach
c- both
d- neither

86- The most biologically aggressive pigmented skin lesion is:
a- junction nevus
b- compound nevus
c- intradermal nevus
d- blue nevus
e- lentigo maligna

87- NOT true of giant cell tumours of bone (osteoclastoma)
1- about 20% metastasize
2- are surrounded by a zone of dense new bone
3- Haemorrhage and haemosidrin-laden phagocytes common
4- Histologically a mixture of spindle cell and multinucleated giant cells
5- Occurs chiefly at bone ends, especially at knee

88- Which one of the following is the commonest neoplastic cause of enlargement of lymph node
a- chronic lymphatic leukaemia
b- diffuse non-Hodgkin's lymphoma
c- follicular lymphoma
d- nodular sclerosis Hodgkin's lymphoma
e- secondary carcinoma

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   c- secondary tumour that reach the ovary by transcoelomic spread  
   d- reach the ovaries from the GIT  
   e- all of the above

96- **The following are examples of hereditary cancer except:**
   a- breast carcinoma  
   b- colon carcinoma  
   c- Wilm's tumour  
   d- osteogenic carcinoma
97- Hereditary predisposition to the development of tumours occurs in the following sites:

a- Retina
b- Colon
c- Uterus
d- Skin
e- Stomach
Select the best single answer:

1. During a routine physical examination, a 49-year-old man is found to have a 2.5-cm “coin lesion” in the upper lobe of his left lung. The lesion is removed surgically, and histologic sections reveal sheets of malignant cells with clear cytoplasm (clear cell carcinoma). Which of the following is the most likely site of origin for this metastatic lung tumor?
   a. Appendix b. Breast
c. Kidney d. Pancreas
e. Stomach

2. A 17-year-old man presents with a lesion on his face that measures approximately 1.5 cm in its greatest dimension. He has a history of numerous similar skin lesions that have occurred mainly in sun-exposed areas. The present lesion is biopsied and reveals an invasive squamous cell carcinoma. This patient most probably has one type of a group of inherited diseases associated with unstable DNA and increased incidence of carcinoma. Which of the following is the most likely diagnosis?
   a. Xeroderma pigmentosa b. Wiskott-Aldrich syndrome
c. Familial polyposis d. Sturge-Weber syndrome
e. Multiple endocrine neoplasia type I

3. A 57-year-old man presents with signs of fatigue that are the result of anemia. Workup reveals that his anemia is the result of bleeding from a colon cancer located in the sigmoid colon. The lesion is resected and at the time of surgery no metastatic disease is found. Which of the following markers would be most useful for future follow-up of this patient for the evaluation of possible metastatic disease from his colon cancer?
   a. alpha fetoprotein (AFP) b. Carcinoembryonic antigen (CEA)
c. Chloroacetate esterase (CAE) d. Human chorionic gonadotropin (hCG)

4. A 14-month-old male infant presents with an enlarging abdominal mass. Laboratory examination reveals increased urinary levels of metanephrine and vanillyl mandelic acid (VMA). A histologic section from the mass reveals a tumor composed of small, primitive-appearing cells with hyperchromatic nuclei and little to
no cytoplasm. Occasional focal groups of tumor cells are arranged in a ring around a central space. Which of the following is the most likely diagnosis?

a. Adrenal cortical carcinoma  b. Ganglioneuroma
c. Nephroblastoma       d. Neuroblastoma
e. Pheochromocytoma

5. A 35-year-old man living in a southern region of Africa presents with increasing abdominal pain and jaundice. He has worked as a farmer for many years, and sometimes his grain has become moldy. Physical examination reveals a large mass involving the right side of his liver, and a biopsy specimen from this mass confirms the diagnosis of liver cancer (hepatocellular carcinoma). Which of the following substances is most closely associated with the pathogenesis of this tumor?

a. Aflatoxin B1  b. Direct-acting alkylating agents
c. Vinyl chloride  d. Azo dyes
e. Naphthylamine

6. A 59-year-old man is found to have a 3.5-cm mass in the right upper lobe of his lung. A biopsy of this mass is diagnosed as a moderately differentiated squamous cell carcinoma. Workup reveals that no bone metastases are present, but laboratory examination reveals that the man’s serum calcium levels are 11.5 mg/dL. This patient’s paraneoplastic syndrome is most likely the result of the ectopic production of which of the following substances?

a. Parathyroid hormone  b. Parathyroid hormone-related peptide
c. Calcitonin             d. Calcitonin-related peptide
e. Erythropoietin

7. Mention the sequence of events that precedes the formation of an infiltrating squamous cell carcinoma of the cervix?

1. Carcinoma in situ  2. Invasive carcinoma
5. Severe dysplasia  6. Squamous metaplasia

8. A 20-year-old woman notes a mass in her left breast after following the directions for breast self-examination provided by her health clinic. Her physician palpates a firm, 1 to 2 cm mass.
There is no nipple discharge and no pain. No axillary adenopathy is present. The overlying skin of the breast appears normal. Her left breast is slightly larger than the right, a condition she says has been present since puberty. Her urine pregnancy test is negative. Mammography confirms the presence of an rounded density, which has no microcalcifications, and reveals no lesions of the opposite breast. Which of the following is the most likely diagnosis?

A - Focus of fat necrosis  
B - Fibroadenoma  
C - Intraductal papilloma  
D - Infiltrating ductal carcinoma  
E - Cystosarcoma phyllodes

9. A 55-year-old man with a 55 pack year history of smoking cigarettes has recently experienced an episode of hemoptysis along with his usual cough. On physical examination there are no abnormal findings. He has a sputum cytology examination performed that on microscopic examination shows atypical cells with hyperchromatic nuclei and orange-pink cytoplasm. Laboratory studies show a serum calcium of 11.3 mg/dL, with phosphorus 2.1 mg/dL. Which of the following chest radiographic findings is this man most likely to have?

A - Large hilar mass  
B - Pneumonia-like consolidation  
C - Peripheral nodule  
D - Carinal compression  
E - Left pleural thickening

10. A 61-year-old man has had a chronic cough for 6 years as a result of smoking 2 packs of cigarettes per day for 45 years. He has noted the onset of headaches over the past 2 weeks. His physician on neurologic exam can find no localizing signs. MR imaging of the brain reveals a solitary 3.5 cm lesion that is located at the grey-white junction in the posterior left frontal lobe. There is no ring enhancement. A stereotactic biopsy of this lesion is performed. Which of the following microscopic appearances is most likely to be present in this biopsy?

A - Organizing abscess  
B - Viral inclusions  
C - Plaque of demyelination  
D - Neuronal loss with gliosis  
E - Metastatic carcinoma
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a. Aflatoxin B1  
b. Vinyl chloride  
c. Naphthylamine  
d. Direct-acting alkylating agents  
e. Azo dyes

13. As a physician, you should be concerned about a surgical pathology report that describes severe dysplasia in a biopsy because:

a) this change indicates irreversible tissue damage  
b) it may be due to irritant that can be avoided  
c) the patient will probably develop cancer  
d) it may be due to viral infection that can be treated  
e) any of the above

14. A 59-year-old man is found to have a 3.5 cm mass in the right upper lobe of his lung. A biopsy of this mass is diagnosed as a moderately differentiated squamous cell carcinoma. Workup reveals that no bone metastases are present, but laboratory examination reveals that the man’s serum calcium levels are 11.5 mg/dL. This patient’s paraneoplastic syndrome is most likely the
result of the ectopic production of which of the following substances?
   a. Parathyroid hormone
   b. Parathyroid hormone-related peptide
   c. Calcitonin
   d. Calcitonin-related peptide
   e. Erythropoietin

15. You are reading a histopathology report which describes the excised tumour as malignant round cell tumour. Immunophenotyping was performed and revealed that tumour cells are negative for LCA, NSE and Desmin, and positive for CD99. Which of the following statement is correct as regarding final diagnosis:
   a- Wilm’s tumor
   b- NHL
   c- Ewing’s sarcoma/PNET
   d- Neuroblastoma
   e- Rhabdomyosarcoma

16. A 4-year-old girl has complained of abdominal pain for the past month. On physical examination, she is febrile, and palpation of the abdomen shows a tender mass on the right loin. Bowel sounds are present. Laboratory studies show hematuria without proteinuria. Abdominal CT scan shows a 12-cm, circumscripted, solid mass in the right kidney. A right nephrectomy is done; What is the most likely diagnosis?
   (A) Angiomyolipoma
   (B) Interstitial cell tumor
   (C) Renal cell carcinoma
   (D) Transitional cell carcinoma
   (E) Wilms tumor

17. During growth factor-induced cellular regeneration, which of the following transitions during cell cycle is controlled by the phosphorylation of the retinoblastoma (RB) protein? :
   (A) G0 to G1
   (B) G1 to S
18. A 60-year-old woman has reported a change in the caliber of her stools during the past month. On physical examination, there are no abnormal findings, but a stool sample is positive for occult blood. A colonoscopy shows a constricting mass involving the lower sigmoid colon, and the patient undergoes a partial colectomy. Which of the following techniques used during surgery can best aid the surgeon in determining whether the resection is adequate to reduce the probability of a recurrence?
   (A) Fine-needle aspiration
   (B) Serum carcinoembryonic antigen assay
   (C) Frozen section
   (D) Electron microscopy
   (E) Flow cytometry

19. You are reading a histopathology report which describes the excised tumour as undifferentiated malignant neoplasm. Immunophenotyping was performed and revealed that tumour cells are negative for LCA, CK and vimentin, and positive for HMB45. Which of the following statement is correct as regarding final diagnosis:
   (A) Undifferentiated carcinoma
   (B) Sarcoma
   (C) Melanoma
   (D) NHL
   (E) Neuroblastoma

20. Which of the following tumor marker is used to confirm the diagnosis of hepatocellular carcinoma:
   (A) LCA
   (B) S100
   (C) Myogenin
   (D) Hep-Par-1
**Match each item in column (A) with the most related in column (B)**

<table>
<thead>
<tr>
<th>Column (A)</th>
<th>Column (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Ovary</td>
<td>a- fibroadenoma</td>
</tr>
<tr>
<td>2- Breast</td>
<td>b- leiomyoma</td>
</tr>
<tr>
<td>3- Bone</td>
<td>c- haemangioma</td>
</tr>
<tr>
<td>4- Uterus</td>
<td>d- metastases</td>
</tr>
<tr>
<td>5- Tongue</td>
<td>e- cystadenoma</td>
</tr>
<tr>
<td>6- Carcinoma of cervix uteri</td>
<td>f- irradiation</td>
</tr>
<tr>
<td>7- Burkitt's lymphoma</td>
<td>g- AIDS</td>
</tr>
<tr>
<td>8- Kaposi's sarcoma</td>
<td>H- oestrogen</td>
</tr>
<tr>
<td>9- Mammary carcinoma</td>
<td>i- EB virus</td>
</tr>
<tr>
<td>10- Osteosarcoma</td>
<td>j- Herpes simplex virus</td>
</tr>
</tbody>
</table>

1- H-pylori carcinoma       a- hepatocellular
2- Human papilloma virus    b- gastric lymphoma
3- Hepatitis B virus        c- cervical carcinoma
4- Estrogen                 d- skin carcinoma
5- Polycyclic hydrocarbons  e- endometrial carcinoma

1- cigarette smoke          a- mesothelioma
2- Aflatoxins               b- leukemia
3- Cyclophosphamide         c- urinary bladder carcinoma
4- Asbestos                 d- lung carcinoma
5- Aromatic amines          e- liver cell carcinoma

6- Choistroma               K- locally malignant tumour
7- Angioma                  L- non-capsulated benign tumour
8- Craniopharyngioma        M- tumour like condition
9- Papilloma                N- embryonic tumour
10- Wilm's tumour           M- hamartoma
1 - Squamous cell carcinoma a- breast
2 - Basal cell carcinoma b- stomach
3 - scirrhous carcinoma c- bladder
4 - transitional cell carcinoma d- skin
5 - Mucoid carcinoma e- renal pelvis

1- Ultra violet irradiation a- mesothelioma
2- AIDS b- leukemia
3- oestrogen c- skin carcinoma
4- EB virus d- lung carcinoma
5- Herpes simplex virus e- hepatocellular carcinoma
6- cigarette smoke f- gastric lymphoma
7- aflatoxins g- urinary bladder carcinoma
8- asbestos h- cervical carcinoma
9- aromatic amines i- endometrial carcinoma
10- H-pylo j- Burkitts lymphoma
11- human papilloma virus k- Kaposi sarcoma
12- hepatitis B virus
13- cyclophosphamide
14- 14-polycyclic hydrocarbons

1. pyloric stenosis a- fibroadenoma
2. enamel origin b- squamous metaplasia
3. chronic cacalar cholecystitis c- fibromatosis
4. desmoid tumour d- hypertrophy
5. breast e- adamantinoma

1- Carcinoma of cervix uteri a- irradiation
2- Burkitt's lymphoma b- HPV
3- Kaposi's sarcoma c- estrogen
4- Mammary carcinoma d- EB virus
5- Osteosarcoma e- Herpes simplex virus

1- Metaplasia a- Endometrium
2- Hyperplasia b- Bronchus
3- Hypoplasia c- Heart
4- Hypertrophy

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1- Hyperplasia a- Hypertension
2- Atrophy b- Congenital
3- Hypertrophy c- Oestrogen
4- Metaplsia d- Disuse
5- Hypoplasia e- Bilharziasis

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1- Metaplasia a- Osteoporosis
2- Atrophy b- Aortic stenosis
3- Hypertrophy c- Myositis ossificans
4- Agenesis d- In situ carcinoma
5- Dysplasia e- Death

-----------------------

1- Carcinoma of cervix uteri a) irradiation
2- Burkitt’s lymphoma b) AIDS
3- Kaposi’s sarcoma c) oestrogen
d) E.B. virus
e) Herpes simplex

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1- blood vessels a) hypertrophy
2- Mitral incompetence b) mucinous cystadenoma
c) kaposi sarcoma
d) squamous metaplasia
e) hyperplasia

-----------------------

1- Chronic calcular cholecystitis a) squamous metaplasia
2- Blood spread b) ventricular hypertrophy
c) cachexia
d) sarcomas
1- Acromegaly  a) squamous metaplasia
2- Bitot spots  b) hyperplasia
3- Atrial septum  c) myxoma
4- Lymphatic spread  d) carcinomas
5- Anaemia  e) ventricular hypertrophy

******************************************************************************
1- Hemorrhagic ascites  a) hypertrophy
2- Adult age  b) intradermal nevus
3- Xerophthalmia  c) squamous metaplasia
4- Cor pulmonale  d) peritoneal metastasis
5- Hypopituitarism  e) hyperplasia

******************************************************************************
1- Pyloric stenosis  a) fibroadenoma
2- Xerophthalmia  b) dysplasia
3- Enamel organ  c) adamantinoma
4- Breast  d) hypertrophy
5- Chronic cystitis  e) squamous metaplasia

******************************************************************************
1- Sole of foot  a) hypertrophy
2- Bilharzial cystitis  b) squamous metaplasia
3- Leukoplakia Vulvae  c) dysplasia
4- Annular carcinoma colon  d) melanoma
5- Desmoid tumour  e) fibromatosis

******************************************************************************
1- Urinary bladder trabeculation  a) chordoma
2- Tuberculous ulcer intestine  b) glandular metaplasia
3- Papanicolaou stain  c) cervical carcinoma in situ
4- Notochord  d) prostatic hyperplasia
5- Sole of the foot  e) malignant melanoma

******************************************************************************
1- Melanocyte  a) heart
2- Ovary  b) hamartoma
3- Brown atrophy  c) cystadenoma
4- Rathk’s pouch  d) craniopharyngioma
5- Lymphangioma  e) pigmented nevus

******************************************************************************
1. Webbed fingers
   a) hypertrophy
2. Atrophy (generalized)
   b) malignancy
3. Uterus in pregnancy
   c) glandular metaplasia
4. Peptic ulcer stomach
   d) apoptosis

******************************************
1. Leukaemia
   a) luminous Paints
2. Osteogenic sarcoma
   b) smoking
3. Skin carcinoma
   c) atomic explosions
4. Lung cancer
   d) solar radiation
5. Bladder cancer
   e) aniline dyes

******************************************
1. Epstein-Barr virus
   a) endometrial carc.
2. Apoptosis
   b) morphogenesis
3. Bittner’s milk factor
   c) Burkitt’s lymphoma
4. Hyper-estrenism
   d) carcinoma breast

******************************************
1. Social habits
   a) cancer liver
2. Diet
   b) cancer lung
3. Parasite
   c) cancer bladder
4. Air pollution
   d) cancer penis
5. Young age
   e) sarcoma bones

******************************************
Match each of these characteristics with the appropriate leukaemia.

1. Commonest form in childhood
   a- acute lymphoblastic
2. Philadelphia chromosome
   b- acute myeloblastic
3. Very large spleen
   c- chronic lymphatic
   d- chronic myeloid
   e- monocytic

For each of the types of ovarian tumour listed on the left select the most appropriate association from the list on the right.

4. Cystic teratoma
   a- associated with virilisation
5. Granulosa cell tumour
   b- benign tumour of germ cell origin
6. Mucinous cystadenoma
   c- histologically identical to seminoma
   d- may cause end. Hyperplasia
   e- pseudomyxoma peritonei
Indicate whether each of the following statements is true (T) or false (F):

1- Omental metastasis are commonly associated with haemorrhagic ascitis
2- Bone metastasis may lead to polycytemia and leucocytosis
3- Locally malignant tumours are commonly capsulated
4- Sarcoma spreads only by blood while carcinoma spread only by lymphatic
5- Oncogens are genes responsible for initiation and progression of cancer
6- Atrophy is irreversible provided the cause is eliminated
7- Agenesis is complete failure of development of an organ
8- Secondary tumours in the portal area are common in the spleen
9- Basal cell carcinoma spreads only locally
10- EB virus is a well established cause of Burkitt's lymphoma
11- Immunodeficiency is associated with increased incidence of tumours
12- Bone metastasis are always osteolytic lesions
13- Aniline dyes are well established chemical carcinogens in human bladder cancer
14- Radioiodine is a well established chemical carcinogens in human thyroid cancer
15- Cigarette smoke is a well established chemical carcinogens in human colonic cancer
16- Deep X-rays is a well established cause of chronic myeloid leukaemia
17- Neoplasia is a form of cell adaptation due to an increase in its functional demands
18- Prominent lymphocytic infiltration associating tumours is an indication of bad prognosis
19- Omental metastasis are commonly associated with haemorrhagic ascitis
20- Bone metastasis may lead to polycytemia and leucocytosis
21- Locally malignant tumours are commonly capsulated
22- Oncogens are genes responsible for initiation and progression of cancer
23- Atrophy is irreversible provided the cause is eliminated
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30- Bone metastasis are always osteolytic lesions.
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32- Radioiodine is a well established chemical carcinogens in human thyroid cancer.
33- Neoplasia is a form of cell adaptation due to an increase in its functional demands.
34- Prominent lymphocytic infiltration associating tumours is an indication of bad prognosis.

Indicate whether each of the following statements is true (T) or false (F):

**The tumour marker CEA**
1-is normally present in the embryo from mesodermal tissues
2-is elevated in up to 90% of patients with colorectal cancer
3-is a useful screening tool for gastrointestinal cancer
4-the level of serum CEA is a poor marker for tumour mass
5-correlates well with the Duke staging of colorectal cancer

**The following mechanisms may cause a qualitative change in the expression of a gene**
1- gene amplification
2- chromosomal rearrangement
3- enhancer insertion
4- point mutation
5- promoter insertion

**The following chemicals are indirect-acting carcinogens**
1- 1,2,5,6 dibenzanthrazine
2- Cyclophosphamide
3- B-napthylamine
4- Acetyl salicylic acid
5- 4-dimethylamino-azobenzene

**Tumour cell kinetics**
1- neoplastic cells divide more rapidly than normal cells
2- neoplastic change results in a shortening in the cell cycle time
the majority of cells in a neoplasm are not in the replicative pool

- tumour growth is due to imbalance between cell formation and cell death
- approximately 75% of neoplastic cells are lost from the replicative pool by death, shedding or differentiation

****************************************************

Concerning salivary gland tumours: (TF?)

1- A cribriform pattern is ominous
2- Sublingual gland the commonest site
3- 9-Tall pink epithelium mixed with lymphoid tissue indicates a lymphoma
4- The tumours that contain cartilage are benign but often recur

Concerning Hodgkin's lymphoma: (TF?)

1- Cells of myeloid type such as eosinophils rarely seen
2- Histologically always shows sheets of Reed-Sternberg giant cells
3- Spleen rarely enlarged at any stage
4- T-cell formation is elevated
5- Usually has affected practically all lymph nodes by the time of diagnosis
6- Never progresses to leukaemia

Concerning cancer of the breast: (TF?)

1- Bone metastasis usually first involve long bones
2- Demonstration of oestrogen receptors indicates probable cure by hormone therapy
3- Though usually not obviously glandular, is regarded as an adenocarcinoma
4- Tumours with a dense lymphocytic infiltrate have a better prognosis
Answer the following questions:

1- Discuss:
   a- Genetic predisposition to cancer
   b- Steps involved in chemical carcinogenesis
   c- Cancer cachexia
   d- Precancerous lesions

2- Compare in a table form between carcinoma and sarcoma

3- Describe the diagnostic application of immunohistochemistry

4- Mention the role of *Rb* gene in cell cycle regulation

5- Define hyperplasia, mention its types and compare between hyperplasia and neoplasia

6- Give an account on:
   a- Hypercalcemia in malignant patients
   b- Staging of malignant neoplasms

7- Describe the role of *P53* in cell cycle control.

8- Write an account on:
   a. Pathology of neuroblastoma
   b. Characters of malignant tumours
   c. Genetic predisposition to cancer

9- Describe the pathological features, outcome and prognostic factors of hepatoblastoma.

10- Enumerate gestational trophoblastic diseases and describe the clinical and pathological features of one of them.

11- Describe the classification and pathology of benign tumours of the breast.

12- Mention the pathology, gross and microscopic features of endometrial carcinoma.

13- What is the differential diagnosis of orbital mass?

14- Discuss the value of tissue tumour markers in clinical practice

15- Give an account on:
a- Co-carcinogens in neoplasia
b- Paraneoplastic syndromes
c- Chemical carcinogens

16- Discuss the value of tissue tumour markers in clinical practice

17- Give an account on:
   a- Paraneoplastic syndromes
   b- The role of radiation in carcinogenesis.

18- Discuss:
   1- Clinical applications of immunohistochemical markers in diagnosis of cancer
   2- Advantages and limitations of cytology in comparing to pathology

19- Give an account on:
   a- Tumour suppressor genes
   b- Angiogenesis
   c- Mechanisms of apoptosis

20- Compare in table form between benign & malignant tumours.

21- Discuss the value of tissue tumour markers in clinical practice.

22- Give an account on microbial carcinogens.

23- Mention the advantages and disadvantages of diagnostic cytology in comparing to biopsy.

24- Describe the role of radiation in carcinogenesis.

25- Discuss the pathology of:
   a- Medullary carcinoma of the breast
   b- Papillary carcinoma of the thyroid gland
   c- Follicular lymphoma
   d- Hepatocellular carcinoma
   e- Medulloblastoma

26- The pathology of small cell neoplasms of bone.

27- Differential diagnosis of squamous intraepithelial lesions of the cervix.

28- Mention the pathological features of high grade gliomas.
   1- Classification and pathology of benign tumours of the breast
   2- Gross and microscopic features of endometrial carcinoma
- Enumerate gestational trophoblastic diseases and describe the clinical and pathological features of one of them.
  2- Mention the pathology and differential diagnosis of plasma cell neoplasms.
  4- Describe the pathological features, outcome and prognostic factors of hepatoblastoma.