29. a. Discuss about VEGF signal transduction pathway.	10	2	3	2,3
(OR) b. Describe non-pharmacological therapy of neuropathic cancer pain.	10	2	5	2,3
30. a. Explain how X-ray computerized tomography and magnetic resonance imaging is used for cancer treatment.	10	2	5	2,3
b. Describe dendritic cell based therapy for cancer.	10	2	6	3,4 ,5

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Reg. No.

B.Tech. DEGREE EXAMINATION, MAY 2022 Seventh Semester 18BTE401T - CANCER BIOLOGY (For the candidates admitted from the academic year 2018-2019 to 2019-2020) Note: Part - A should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute. Part - B should be answered in answer booklet. Max. Marks: 75 Time: 21/2 Hours Marks BL CO PO $PART - A (25 \times 1 = 25 Marks)$ Answer ALL Questions 1 1 1 3 1. Cancer of epithelial origin is called_ (B) Sarcoma (A) Carcinoma (D) Myeloma (C) Lymphoma 1 1 1 3 2. One of the following is NOT a hallmark of cancer. (B) Evasion of apoptosis (A) Growth signal autonomy (C) Unlimited replicative potential (D) Inhibition of angiogenesis 1 1 2 3. Cancer of mesoderm origin is called (B) Sarcoma (A) Carcinoma (D) Myeloma (C) Lymphoma 4. Cancer of glandular tissues is called (A) Adenocarcinoma (B) Sarcoma (D) Myeloma (C) Lymphoma 5. Transformed (cancer) cell acquires all of the following phenotypes except **ONE** (A) Fails to exhibit contact (B) Can grow in conditions of low

(A) Fails to exhibit contact (B) Can grow in conditions of low inhibition and instead grow as serum piles of cells

(C) Adopts a round morphology (D) Exhibits contact inhibition rather than a flat or extended one

6. One of the following is an example of mono functional alkylating agent
(A) Cisplatin
(B) Cyclophosphamide
(C) Carboplatin
(D) Adriamycin

7. Corrector of damaged DNA bases or single-strand DNA breaks is called 1 1 2 3

(A) Base excision repair (BER)
(B) Nucleotide excision repair (NER)
(C) Mismatch repair (MMR)
(D) Homologous recombination (HR)

1 2 3

Endoplasmic reticulum ated form of proto-oncogene is tent Gene Oncogene T dimerization is mediated by ptor. TGF MAPK and seed hypothesis was proposed Paged William mation of new blood vessels from a d Metastasis Angiogenesis (Specific Angiogenic inducers inclu EGF	B) Mitochondria D) Sarcoplasmic reticulum ned as B) Promoter D) Neogeneupon binding of cytokine to B) TNF D) JAK by B) Paget D) John ngioblasts or progenitor stem cells B) Vasculogenesis D) Neoplasia	o its 1	1 3 1 3 1 4,5 1 4	3 3	26. a. b. 27. a. b. 28. a.	Molecular imaging techniques probes to detect biologic mole following except ONE (A) PET (C) X-ray Chemotherapy drug tamoxifen (A) S (C) G2 PART - B (5: Answer A) Explain the metabolic changes in the structure, function as Enumerate the major DNA repairs Explain the role of microRNA as Comment about current strategical comment current current current strategical comment current cur	es which involve using molecular imaging ecules in living subjects includes all of the (B) SPECT (D) MRI affects phase of the cell cycle. (B) G1 (D) M × 10 = 50 Marks) LL Questions in tumor cells. (OR) and regulation of p53.	1 Marks 10 10 10 10	1 BL 2 2 2	6 3 CO PC 1 3,4 2 2,3 ,4 3,4 3,4 ,5	4
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n activation, Akt translocates from	cytosol to to induce a	anti- ¹	1 3	4	24						
						(C) D-Fillrollracil	(D) Vinblastine				
AT D	(B) H-Ras (D) D-Ras					(A) Doxorubicin (C) 5-Flurouracil	(B) Methotrexate				
of the following is NOT a member		1	1 3	3	23.	mitotic arrest at metaphase, interference with chromosome	erization of the microtubules resulting in dissolution of the mitotic spindle, and	l l	1	6 2	2
CED	(D) DEP				23						
ctive form of RAS is converted in t	o active RAS by	- 1°	1 3	2		(A) Gordon Isaacs (C) Gordon Mathew	(B) Gordon John				
TOTAL A S					22.	The first patient treated with	the linear accelerator (radiation therapy) fo	r 1	1	6	2
ones.		the 1	1 2	2 4		(C) Monoclonal antibodies	(B) Hormonal therapy(D) Surgery				
					21.	Systemic treatment for cancer (A) Chemotheran	includes all EXCEPT one of the following.	1	1	6	2
AIM	(B) ATR	ige? 1	1 2	2 3		(C) Citaxin	(B) Mitaxin (D) Digitaxin				
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26	(NER)					(A) Sunitinib (C) Vastinib	(B) Sorafenib (D) Semaxanib				
reactive oxygen species, ionizing i	adiation and neonlastic drugs		1 2	2 4	19	First VEGFR inhibitor that we toxicity and poor responses is	ent to phase III trials but was withdrawn due t	0 1	1	4,5	3
oic	Base excision repair (BER) Mismatch repair (MMR) Ch one of the following is NOT a start ATM RAS removes the acetyl groups recenses. Histone acetylase DNA methylase ive form of RAS is converted in the GNEF	Base excision repair (BER) (B) Nucleotide excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombin (HR) ch one of the following is NOT a molecular 'sensor' of DNA dama ATM (B) ATR RAS (D) DNA-PK removes the acetyl groups reestablishing the positive charge in thes. Histone acetylase (B) Histone deacetylase (D) Phosphorylase ive form of RAS is converted in to active RAS by GNEF (B) GAP	Base excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombination (HR) ch one of the following is NOT a molecular 'sensor' of DNA damage? ATM (B) ATR RAS (D) DNA-PK removes the acetyl groups reestablishing the positive charge in the nes. Histone acetylase (B) Histone deacetylase DNA methylase (D) Phosphorylase ive form of RAS is converted in to active RAS by GNEF (B) GAP	Base excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombination (HR) ch one of the following is NOT a molecular 'sensor' of DNA damage? ATM (B) ATR RAS (D) DNA-PK removes the acetyl groups reestablishing the positive charge in the nes. Histone acetylase (B) Histone deacetylase DNA methylase (D) Phosphorylase ive form of RAS is converted in to active RAS by GNEF (B) GAP	Base excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombination (HR) Ch one of the following is NOT a molecular 'sensor' of DNA damage? ATM (B) ATR (C) DNA-PK removes the acetyl groups reestablishing the positive charge in the nes. Histone acetylase (B) Histone deacetylase (D) Phosphorylase ive form of RAS is converted in to active RAS by (B) GAP	Base excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombination (HR) Ch one of the following is NOT a molecular 'sensor' of DNA damage? ATM (B) ATR RAS (D) DNA-PK 21. removes the acetyl groups reestablishing the positive charge in the nes. Histone acetylase (B) Histone deacetylase DNA methylase (D) Phosphorylase ive form of RAS is converted in to active RAS by GNEF (B) GAP	Base excision repair (BER) (B) Nucleotide excision repair (NER) (Mismatch repair (MMR) (D) Homologous recombination (HR) (C) Vastinib (A) Sunitinib (C) Vastinib (C) Vastinib (C) Vastinib (C) Citaxin (A) Vitaxin (A) Vitaxin (B) ATR (C) Citaxin (C) Citaxin (C) Citaxin (C) Monoclonal antibodies (A) Vitaxin (C) Citaxin (C) Citaxin (C) Citaxin (D) DNA-PK (E) Monoclonal antibodies (D) Phosphorylase (E) Monoclonal antibodies (D) Phosphorylase (E) Gordon Isaacs (C) Gordon Mathew	Base excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombination (HR) Chone of the following is NOT a molecular 'sensor' of DNA damage? 1 1 2 3 (A) Vitaxin (B) Mitaxin Chone of the following is NOT a molecular 'sensor' of DNA damage? 1 1 2 3 (C) Citaxin (D) Digitaxin RAS (D) DNA-PK 21. Systemic treatment for cancer includes all EXCEPT one of the following. (A) Chemotherapy (B) Hormonal therapy (C) Monoclonal antibodies (D) Surgery (A) Chemotherapy (B) Hormonal therapy for retinoblastoma in 1957 is (A) Gordon Isaacs (B) Gordon John (GNEF) (B) GAP	Factor oxygen species, ionizing radiation and neoplastic drugs Base excision repair (BER) (B) Nucleotide excision repair (NER) Mismatch repair (MMR) (D) Homologous recombination (HR) Cho one of the following is NOT a molecular 'sensor' of DNA damage? 1 1 2 3 3 (A) Vitaxin (B) Mitaxin (B) Mitaxin (C) Citaxin (D) Digitaxin (C)	Base excision repair (BER) (B) Nucleotide excision repair (NER) (NER) (B) Nucleotide (NER) (NER) (C) Vastinib (B) Sorafenib (D) Semaxanib (A) Sumitinib (B) Sorafenib (D) Semaxanib (C) Vastinib (D) Semaxanib (A) Vitaxin (B) Mitaxin (B) Mitaxin (B) Mitaxin (C) Citaxin (D) Digitaxin (A) Vitaxin (B) Mitaxin (B) Mitaxin (C) Citaxin (D) Digitaxin (A) Chemotherapy (B) Hormonal therapy (B) Hormonal therapy (B) Surgery (A) Chemotherapy (B) Hormonal therapy (B) Hormonal therapy (B) Surgery (A) Chemotherapy (B) Hormonal therapy (B)	toxicity and poor responses is sort that so the was withdrawn due to 1 4,5 and poor responses is sort toxicity and poor responses is sort and poor response is sort and poor responses is sort and poor response is sort and poor responses i