



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम , केरल- 695 011
(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
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Entrance Examination 2020- MCh _ Neurosurgery (After MBBS)

Sl No	Question	Answer	OptionA	OptionB	OptionC	OptionD
1	The membrane of Lilliequist separates which of the following subarachnoid cisterns?	D	Ambient cistern and crural cistern	Ambient cistern and quadrigeminal cistern	Interpeduncular and ambient cistern	Interpeduncular and prepontine cistern
2	The drug regimen used in landmark MAGIC trial was	C	Epirubicin, Cisplatin, and 5FU (bolus)	Capecitabine, Oxaliplatin, Epirubicin (infusional)	Epirubicin, Cisplatin, and 5FU (infusional)	Cisplatin, capecitabine, Epirubicin (bolus)
3	Incidence of lymph nodal metastasis in early gastric cancers limited to mucosa is	B	3%	10%	20%	50%
4	In the treatment of hormone refractory prostate cancer: i. Palliation of bone pain is superior with docetaxel when compared with mitoxantrone and prednisone ii. Patient survival with docetaxel-based therapy is improved when compared with survival with mitoxantrone and prednisone therapy iii. Docetaxel-based therapy is a treatment modality for men with androgen-independent prostate cancer iv. Sipuleucel-T is a viral vector used to deliver targeted PSA antigens	C	Only i is true	Only i&ii is true	Only I,ii&iii is true	All are true
5	Which among the following is not considered as a high grade tumour in carcinoma of parotid	A	Acinic cell Ca	SCC	Malignant pleomorphic adenoma	Adeno Ca
6	All are risk factors for development of squamous cell carcinoma esophagus, EXCEPT	A	Gastroesophageal reflux disease	Tylosis	Plummer vinson syndrome	Achalasia
7	Which of the following is not true regarding meta-analysis?	D	Meta-analysis based on individual patient data is more precise than meta-analysis based on summarized p-values	Combines the results of several studies that address a set of related research hypotheses	Subset analysis can be better addressed by meta-analysis.	Meta-analysis on therapeutic studies usually includes both randomized and nonrandomized trials.
8	Regarding nasopharyngeal carcinoma (NPC): i. Lymphatic epithelial variant is a subtype of keratinizing squamous cell type of NPC ii. Those of southern Japanese descent are more susceptible to NPC in comparison to people that resides in other countries iii. Uptake of nitrosamine-rich diet and prolonged subjection to wood dusts are also vital in NPC carcinogenesis iv. EBV infection is most commonly associated with keratinizing squamous cell type of NPC: False statements are:	C	i&ii	ii&IV	i, ii and iv	i, ii and iii
9	Regarding trans-arterial chemoembolization for patients with hepatocellular carcinoma, which of the following is not an absolute contraindication?	B	ECOG performance status 3	Mild encephalopathy	Total bilirubin of 5 mg/dl	Child-Pugh C cirrhosis
10	A premenopausal woman on adjuvant tamoxifen therapy should avoid	A	Soy supplements	Fish oil (omega 3)	Tea tree oil	Kava (piper methysticum)
11	A 25 year old man presents with gynaecomastia and reduced libido. He has a prolactin level of 1500 ng/ml, TSH- 2 mU/L, Serum cortisol level of 5 mcg/dl with bitemporal hemianopsia. The MRI scan of brain shows a pituitary macroadenoma(1.2x1x1.8 cm).The treatment of choice would be,	B	Transcranial microscopic excision	Oral Cabergoline	Trans-nasal endoscopic excision	Oral ketoconazole
12	The most common first metastatic site for ocular melanoma is:	A	Liver	Skin	Brain	Lung
13	The most important feature that distinguishes osteosarcoma from other tumours that arise from primitive mesenchymal cell is	B	A "sunburst" pattern on x-ray	The production of osteoid	Specificity of chromosomal translocation by karyotyping	Metaphyseal rather than diaphyseal origin
14	Which of the following statements regarding the use of tumor markers in colorectal cancer is true?	B	CEA is recommended as a screening for colorectal cancer.	Patients with KRAS mutation in codons 12 or 13 have low probability of achieving benefit from anti-EGFR antibody therapy.	MSI predicts efficacy of adjuvant chemotherapy in colorectal cancer.	CEA has limited utility in postsurgical surveillance and monitoring metastatic disease.

15	Which of the following neoplasia is not an intraepithelial marker for invasive cancer	D	Actinic keratosis	Bronchial dysphasia	Colorectal adenoma	Junctional nevus
16	Hemorrhagic cystitis-TRUE statement is	A	Mesna acts by providing a free sulfhydryl group that binds to the metabolite and neutralise it	Bladder protection with mesna is mandatory in all receiving cyclophosphamide	Mesna should be given in divided doses to total 100% of the total dose of cyclophosphamide or ifosfamide	Hemorrhagic cystitis is caused by direct damage to bladder wall by cyclophosphamide or ifosfamide
17	Historically the first chemotherapeutic drugs used in the clinical setting were	B	Antimetabolites	Alkylating agents	Anthracyclines	Taxanes
18	Retroviruses are	A	RNA viruses that have capacity to synthesize double stranded DNA from single stranded viral RNA genome	DNA viruses that have capacity to synthesize double stranded DNA from single stranded viral RNA genome	RNA viruses that have capacity to synthesize single stranded DNA from single stranded viral RNA genome	DNA viruses that have capacity to synthesize single stranded DNA from single stranded viral RNA genome
19	Following statements regarding Pagets disease of the breast are true EXCEPT	C	Pagets cells within the epidermis is pathognomonic	May occur with underlying invasive cancer or DCIS	Never occur alone without underlying invasive cancer	Represents in situ cancer of the epidermis of nipple
20	An 11 year old patient presents to outpatient department because of a family history of medullary carcinoma of thyroid. Physical examination is normal. Which of the following tests would you perform?	A	Urine VMA level	Serum insulin level	Serum gastrin level	Serum glucagon level
21	Which of the following statements regarding the p-value of a test is correct-	B	It is the probability of detecting a true positive result	It is the probability of getting a false positive result or the probability of the observed effect being due to chance	It is the probability of detecting a clinically relevant effect or the probability of the observed effect not being due to chance	It is the probability of accepting the null hypothesis
22	The most important prognostic factor for patients undergoing radical hysterectomy and pelvic lymphadenectomy for stage IB to IIA cancer cervix is	D	Histologic type	Presence of parametrial invasion	Size of primary tumour	Status of lymph nodes
23	An artery of Percheron territory infarct would result in,	B	Bilateral pontine infarcts	Bilateral thalamic and mesencephalic infarcts	Unilateral thalamic and diffuse brain stem infarcts	Hypothalamic and medullary infarcts
24	Imiquimod, an imidazoquinoline, a novel synthetic compound is most commonly used in the treatment of	C	Malignant melanoma	Cervical intra epithelial neoplasia	Vulval intra epithelial neoplasia	Hydradenoma papilliferum
25	The vein of Labbé connects	B	Deep middle cerebral vein and transverse sinus	Superficial sylvian vein and transverse sinus	Superficial middle cerebral vein and superior petrosal sinus	Superficial middle cerebral vein and sphenoparietal sinus
26	Which of the following is NOT a branch of anterior trunk of internal iliac artery	C	Middle rectal artery	Internal pudental artery	Superior gluteal artery	Inferior gluteal artery
27	As per Gompertzian growth kinetics, the growth rate of a tumor peaks when the tumor is approximately ----- % of maximum size.	B	90%	37%	50%	75%
28	The most common genetic alteration in the progression of head and neck cancer is	A	Inactivation of p16 gene	Inhibition of CDK	Mutation of p53 gene	None of the above
29	The mean incubation period for SARS-nCOV-2 infection is	B	2 days	5 days	8 days	10 days
30	The workhorse flap for head and neck reconstruction	A	Pectoralis major myocutaneous flap	Deltpectoral flap	Nasolabial flap	Microvascular free flap
31	In the nervous system, melanocytes are concentrated in	A	Ventral medulla	Amygdala	Red nuclei	Septum pellucidum
32	Which of the following histopathological features of the surgical margin in head and neck cancers is not a high risk for recurrence?	B	Carcinoma in situ at the margin	Pushing tumor borders	Surgical margin <5 mm	Invasive carcinoma at the margin
33	. Infection with the parasite Schistosoma hematobium predisposes to which of the following malignancies-	A	Carcinoma urinary bladder	Cholangiocarcinoma	Pancreatic carcinoma	Gastric carcinoma

34	MEN-2B syndrome is not characterised by	A	Pituitary adenoma	Phaeochromocytoma	Mucosal neuromas	Carcinoma Thyroid
35	Whipple's resection for carcinoma pancreas does not usually include	C	Choledochojejunostomy	Pancreaticojejunostomy	Duodenojejunostomy	Gastrojejunostomy
36	Which organ is not affected by ulcerative colitis	D	Ileum	Eyes	Liver	Duodenam
37	Transurethral resection of prostate (TUR) is usually associated with TUR syndrome that causes all except,	B	Hyponatremia	Hyperkalemia	Cerebral oedema	Hypertension
38	Trans-hiatal esophagectomy and gastric pull up would be ideal in which scenario	B	25 year old lady with upper third esophageal squamous cell carcinoma	40 year old man with lower third esophageal adenocarcinoma	30 year old man with a middle third esophageal perforation and mediastinitis	45 year old lady with gastroesophageal junction ulceroproliferative adenocarcinoma and ascites
39	The Nobel prize in Medicine has been awarded to which of the following surgeons ?	C	Theodore Bilroth	Alexis Camellio	Theodore Kocher	William Halstead
40	Clagett's window is a surgical procedure done for	B	Large invasive thymomas	Empyema thoracis	Mediastinal biopsy	Thoracic sympathectomy
41	With reference to organ transplantation, acceptable limits of cold ischaemia time are	B	Heart - 2 hours, Liver-3 hours, Kidney-6 hours	Heart - 4 hours, Liver-6 hours, Kidney-24 hours	Heart - 8 hours, Liver-6 hours, Kidney-10 hours	Heart - 1 hour, Liver-2 hours, Kidney-4hours
42	About blood transfusions, which of the following statement is incorrect?	A	Platelets have a shelf life of 3 weeks	B. Cryoprecipitate is useful in low fibrinogen conditions and in factor VIII deficiency.	C. Fresh frozen plasma (FFP) is considered as the first-line therapy in coagulopathic haemorrhage.	D. Patients can pre-donate blood up to 3 weeks before surgery for autologous transfusion
43	About wound healing, which of the following statements are true?	A	Granulation, contraction and epithelialization are hallmarks of healing by secondary intention.	Tertiary intention involves immediate closure of the wound.	A crushed and contaminated wound is best suited for healing by primary intention.	Primary repair of all structures should be attempted in an untidy wound.
44	Which of the following procoagulant factors is not synthesised by the liver ?	A	Von Willebrand factor	Fibrinogen	Factor VII	Factor X
45	Which tumor of the pancreas of endocrine origin has the best prognosis?	C	Somatostatinoma	Gastrinoma	Insulinoma	VIPoma
46	Breast conservation surgery in carcinoma breast management is strongly contraindicated in	D	Infiltrating ductal carcinoma, grade 3	Vascular invasion	Tumour size of 2.5 cms	Positive single surgical margin
47	Which of the following is least likely to have a post operative cardiac complication after elective surgery?	D	Myocardial infarction 5 months prior.	A harsh aortic systolic murmur	Premature ventricular contractions on ECG	Features of congestive heart failure and 8 g/dL haemoglobin
48	Fondaparinux, a newer anticoagulant used for treatment of acute venous thromboembolism has the following mechanism of action	A	Antithrombin III-mediated selective inhibition of Factor Xa	Direct Thrombin inhibition	Inactivating thrombin and activated factor XII through an antithrombin dependent mechanism	Inhibiting the synthesis of vitamin K-dependent clotting factors, which include Factors II, VII, IX, and X
49	Which of the following is not correct about about reactionary haemorrhage ?	D	It is delayed haemorrhage occurring within 24 h after operation.	It is usually caused by dislodgement of clot, normalization of blood pressure or slippage of ligature.	It can be significant, requiring re-exploration.	It is usually venous
50	The term plunging ranula refers to which clinical entity?	A	A mucous retention cyst originating from the submandibular and sublingual glands which perforates the mylohyoid muscle to enter the neck	A malignant congenital salivary mass arising from the submandibular gland	A benign salivary mass involving the parotid and submandibular glands	A mucous retention cyst originating from the sublingual glands, limited by the mylohyoid muscle

51	Chronic immunosuppression in liver transplant patients predisposes to which malignancy most commonly ?	B	Kaposi's sarcoma	Non-Hodgkin's lymphoma	Renal cell carcinoma	Askin's tumor
52	True about Gastro intestinal stromal tumors (GIST) is?	A	Surgical excision has the best prognostic outcome	Tyrosine kinase inhibitors offer no benefit for adjuvant therapy	Most tumors are large and cause intestinal obstruction	Size less than 4 cm and homogeneity on endoscopic ultrasound is a predictor for malignant GIST.
53	The most common type of congenital trachea esophageal fistula (TEF) encountered in pediatric surgical practice is	A	Esophageal atresia with distal TEF	Esophageal atresia with proximal TEF	Isolated TEF	"H" type TEF
54	The risk of post-operative surgical site infection (SSI) in "clean contaminated wounds" is	B	1-5%	3-11%	10-20%	20-25%
55	Which of the following bariatric surgical procedures has the most significant weight loss after surgery?	C	Vertical banded gastroplasty	Roux-en-y gastric bypass	Biliopancreatic diversion	Gastric banding
56	Which of the following is true about Wilm's tumor ?	C	Usually affects adolescent males sporadically	Has a survival of 30-40% for Stage I even with surgery and multimodal therapy	Most commonly presents as an abdominal mass	A. Bilateral Wilm's tumor may be present in 30-40% of patients
57	Which of the following zones of the adrenal gland is the site of aldosterone synthesis ?	A	Zona glomerulosa	Zona fasciculata	Zona reticularis	Adrenal medulla
58	During laparoscopic inguinal hernia repair, the "triangle of doom" is an important landmark as it contains	A	Iliac artery and vein	Vas deferens	Femoral artery	Testicular vessels
59	Which of the following centres in the brain stem does not mediate vertical gaze movements?	C	Posterior commissure	Rostral interstitial nucleus of Cajal	Parapontine reticular formation	Nucleus of Darkschewitsch
60	A far lateral disc prolapse at L4-5 is most likely to cause the following deficit,	C	Toe dorsiflexion weakness	Plantar flexion weakness	Foot inversion weakness	Foot eversion weakness
61	A 20 year old villager has insidious onset upgaze paresis, convergence retraction nystagmus, light near dissociation and retracted eyelids. The most likely pathological lesion is	B	Pontine glioma	Pineal germinoma	Pulvinar tuberculoma	Vermian medulloblastoma
62	Dentate gyrus is located in	A	Temporal lobe	Mesial occipital lobe	Insular cortex	Cingulate cortex
63	A palliative surgical option for primary generalised drug resistant atonic seizures would be	D	Selective amygdalohippocampotomy	Multilobar resection	Posterior quadrant disconnection	Corpus callosotomy
64	Which of the following tumor terminology has been deleted from the WHO 2016 classification of CNS tumors ?	B	Diffuse midline glioma	Gliomatosis cerebri	Epithelioid glioblastoma	Diffuse leptomeningeal glioneuronal tumor
65	The sensitivity of RT-PCR for COVID-19 testing is highest in	B	Nasal swab	Bronchoalveolar lavage	Sputum	Throat swab
66	A 9 year old boy presents with episodes of uncontrollable laughter with transient unresponsiveness, behavioural disturbances and precocious puberty The most likely diagnosis would be	A	Hypothalamic hamartoma	Craniopharygioma	Hypothalamic glioma	Supra sellar germinoma
67	The artery of Bernasconi and Cassinari is a branch of	B	Thalamoperforator branches	Internal carotid artery	Basilar artery	Medial posterior choroidal artery
68	A neurosurgical resident wants to compare the mean systolic BP just after giving three different medications for vasospasm prevention to 3 groups of patients operated for aneurysmal sub arachnoid haemorrhage. Assuming that the data are normally distributed, a suitable statistical test to compare the mean systolic BP of the 3 groups would be,	C	t-test	Wilcoxon test	Analysis of variance (ANOVA)	Mann-Whitney U test
69	Tolvaptan is a medication used for the treatment of	B	Acromegaly	SIADH	Cushing's disease	Leptomeningeal gliomatosis
70	The blood brain barrier is absent in all parts of the brain except	B	Area postrema	Induseum griseum	Neurohypophysis	Pineal gland
71	Which of the following is not a part of the limbic system	B	Fimbria of fornix	Thalamic fasciculus	Diagonal band of Broca	Mammillothalamic tract
72	Resting membrane potential of a neuron is	C	- 90 mV	66 mV	- 70 mV	- 55 mV
73	Which of the following histological variants of a meningioma is associated with the most aggressive clinical behaviour?	D	Angiomatous	Chordoid	Clear cell	Papillary
74	The recurrent artery of Heubner is best described as	A	Large medial lenticulostriate perforator from the anterior cerebral artery	Lateral lenticulostriate perforator from the middle cerebral artery	Branch of the posterior communicating artery	Lateral lenticulostriate perforator from the internal carotid artery

75	The most common investigation used for the work up for drug resistant epilepsy is,	A	Video EEG	Functional MRI	Interictal PET scan	Magnetoencephalography (MEG)
76	The upper third of the clivus can be approached by all of the following surgical approaches except	A	Far Lateral approach	Trans-basal	Le-Fort I transmaxillary approach	Extended transnasal transsphenoidal
77	The Fisch approach for large skull base lesions refers to	B	Pre auricular trans temporal approach	Retro auricular infra temporal approach	Retro auricular post sigmoid transcondylar approach	A. Combined pre and post sigmoid approach
78	Dexmedetomidine, a drug used in anaesthesia for awake craniotomy is	A	Alpha 2 adrenergic receptor agonist	Sedative with great risk of respiratory depression	Alpha 1 blocker	Serotonin antagonist
79	4- year old child has a focal cystic brain stem glioma and on neurological examination is noted to have a right "one-and-half syndrome". The localisation would be	A	Right Medial longitudinal fasciculus and right parapontine reticular formation	Right Medial longitudinal fasciculus and posterior commissure	Left Medial longitudinal fasciculus and bilateral parapontine reticular formation	Left Medial longitudinal fasciculus and right parapontine reticular formation
80	The most sensitive method for detecting carpal tunnel syndrome is	B	Needle examination of the abductor pollicis brevis	Palmar sensory conduction time of the median nerve	Motor amplitude of the median nerve	Motor distal latency of the median nerve
81	Sprengel's deformity refers to a(n)	A	Congenital elevation of the scapula	Congenital fusion of the upper cervical vertebrae	Congenital absence of clavicle	Post- laminectomy kyphosis
82	Most patients with intrinsic brainstem gliomas initially present with	A	Cranial neuropathies	Apneustic breathing	Hydrocephalus	Limb wasting
83	Which of the following features is suggestive of ulnar nerve compression at the wrist (Guyon's canal)?	D	Aching along the medial proximal forearm	"Claw" hand	Paresthesia in an ulnar distribution	Sparing of dorsal hand sensation
84	All of the following are true of SCIWORA except	C	Acronym for "spinal cord injury without radiographic abnormality"	More common in children	MRI is always unremarkable	No evidence of spinal fracture is seen
85	The most common complication of percutaneous radiofrequency trigeminal gangliolysis is	B	Anesthesia dolorosa	Paresthesias or dysesthesias	Keratitis	Masticatory weakness
86	Which of the following is <i>not</i> a feature of Parinaud's syndrome?	D	Dissociated light-near response	Lid retraction	Nystagmus retractorius	Third nerve palsy
87	Which of the following is <i>true</i> of tuberculous meningitis?	C	Headache is usually absent.	If untreated, the clinical course is self-limited.	The protein content of the cerebrospinal fluid (CSF) is almost always elevated	The inflammatory exudate is found mainly at the convexities.
88	The marker linked to the Huntington gene is localized to the short arm of chromosome	A	4	11	17	22
89	Which of the following antiepileptic drugs has the shortest half-life?	D	Carbamazepine	Ethosuximide	Phenobarbital	Sodium Valproate
90	The lesion in hemiballismus is localized to the contralateral	D	Brachium conjunctivum	Caudate nucleus	Dorsomedial nucleus of the thalamus	Subthalamic nucleus
91	Each of the following is true of central pontine myelinolysis except	A	A marked inflammatory response with destruction of nerve cells in the pons is seen.	It is associated with rapid correction of hyponatremia.	It is associated with chronic alcoholism	Quadriplegia, pseudobulbar palsy, and a locked-in syndrome can occur.
92	Which of the following is <i>true</i> of the occipital eye field?	A	With lesions in this area, the patient can direct the eyes to a particular location on command	It subserves pursuit eye movements that are largely voluntary.	Lesions in this area are associated with transient deviation of the eyes away from the side of the lesion	The threshold for excitation in this area is lower than in the frontal eye fields.
93	Descending fibers of the medial longitudinal fasciculus (MLF) arise from all of the following structures except the	A	Inferior colliculus	Cajal's interstitial nucleus	Medial vestibular nucleus	Pontine reticular formation
94	The anterior choroidal artery supplies portions of each of the following structures except the	D	Amygdala	Globus pallidus	Hippocampus	Hypothalamus

95	Proprioception from the lower extremities is mediated by	B	Dorsal column–medial lemniscal system	Clarke's column and dorsal spinocerebellar tract	Nucleus cuneatus and cuneocerebellar tract	Nucleus gracilis and dorsal spinocerebellar tract
96	Each of the following is true of G proteins <i>except</i>	A	Each G protein is regulated by only one type of receptor.	Each G protein may regulate multiple effectors.	The "a" subunit binds guanosine triphosphate (GTP).	The "b" and "g" subunits help anchor the "a" subunit to the plasma membrane.
97	The velocity of an action potential increases with a	B	High transmembrane resistance, low internal resistance, and high membrane capacitance	High transmembrane resistance, low internal resistance, and low membrane capacitance	Low transmembrane resistance, high internal resistance, and high membrane capacitance	Low transmembrane resistance, low internal resistance, and high membrane capacitance
98	Which of the following vascular malformations have no intervening brain parenchyma between blood vessels?	C	Arteriovenous malformations	Capillary telangiectasias	Cavernous malformations	Venous angiomas
99	The most common neurologic complication of acquired immunodeficiency syndrome (AIDS) is	A	Dementia	Inflammatory polyomyositis	Lymphoma	Myelopathy
100	The most common sites of hypertensive hemorrhage, in decreasing order of frequency are	B	Lobar, putamen, cerebellum, thalamus, pons	Putamen, lobar, thalamus, cerebellum, pons	Putamen, thalamus, pons, lobar, cerebellum	Thalamus, cerebellum, lobar, putamen, pons