Post Graduate Medical Diploma (Part-I)
Diploma in Psychological Medicine (DPM)
Paper-I
(Multiple Choice Questions)
MODEL PAPER

Signatures of Candidate

Roll No.

Total Marks: 100
Time Allowed: 2 hours

Instructions:

i. Read the instructions on the MCQ Response Form carefully.
ii. Attempt ***all*** questions.
iii. Question Paper to be returned along with MCQ Response Form.
iv. Candidates are strictly prohibited to give any identification mark except Roll No. & Signatures in the specified column only.

Q.1 Midbrain develops from:

a) Ectoderm.
b) Endoderm.
c) Mesoderm.
d) Metencephalon.
e) Telencephalon.

Q.2 You have seen a patient who is presenting with signs of meningial irritation. You have decided to examine his CSF. While doing a lumber puncture, CSF is taken from:

a) Extradural space.
b) Subdural space.
c) Lateral ventricle.
d) Subarachnoid space.
e) Central canal of spinal cord.

Q.3 Cerebral aqueduct is situated in:

a) Cerebral hemisphere.
b) Forebrain.
c) Hindbrain.
d) Hypophysis.
e) Mesencephalon.

Q.4 Neurotransmitter secreted at the preganglionic fibres of sympathetic nervous system is

a) Adrenaline.
b) Nor adrenaline.
c) Acetylcholine.
d) Serotonine.
e) Dopamine.

Q.5 You have seen a child who developed Poliomyelitis. Which part of spinal cord is affected?

a) Anterior gray horn.
b) Posterior gray horn.
c) Fasciculus gracilis.
d) Fasciculus cuneatus.
e) Substantia gelatinosa.

Q.6 Gracile and cuneate tubercles are seen on the surface of:

a) Pons.
b) Medulla oblongata.
c) Cerebrum.
d) Cerebellum.
e) Spinal cord.

Q.7 Tegmentum is a part of:

a) Spinal cord.
b) Medulla oblongata.
c) Pons.
d) Mid brain.
e) Thalamus.

Q.8 You have seen a patient who has a CT scan report showing a tumour in cerebellum. Which of the following symptoms suggests involvement of cerebellum:

a) Blindness.
b) Aphasia.
c) Mental retardation.
d) Dysdiadochokinesis.
e) Alexithymia.

Q.9 Facial colliculus is found in which part of fourth ventricle?

a) Roof.
b) Right lateral wall.
c) Left lateral wall.
d) Posterior wall.
e) Floor.

Q.10 You have seen a patient who developed extra pyramidal symptoms after taking haloperidol. Which pathway is affected?

a) Nigrostriatal.
b) Tuberoinfundibular.
c) Hypothalamo hypophysial.
d) Cortico limbic.
e) Spinothalamic.

(Continued)

Q.11 Substantia nigra is situated in

a) Thalamus.
b) Hypo thalamus.
c) Basal ganglia.
d) Midbrain.
e) Cerebellum.

Q.12 A patient presents with features of Wernicke's encephalopathy. Pathology is most likely in:

a) Spinal cord.
b) Mid brain.
c) Diencephalon.
d) Cerebellum.
e) Pons.

Q.13 Lateral geniculate body is a part of:

a) Spinal cord.
b) Medulla oblongata.
c) Pons.
d) Thalamus.
e) Hypothalamus.

Q.14 Following contains commissural fibres:

a) Internal capsule.
b) Corpus callosum.
c) Medial geniculate body.
d) Spinocerebellar tract.
e) Posterior horn.

Q.15 You have seen a patient who cannot speak. If lesion is in Broca's area of speech, where is it situated?

a) Superior frontal gyrus.
b) Inferior frontal gyrus.
c) Pre central gyrus.
d) Post central gyrus.
e) Inferior temporal gyrus.

Q.16 Third and fourth ventricles are connected through:

a) Cerebral aqueduct.
b) Central canal.
c) Interventricular foramina.
d) Foramen of Luschka.
e) Foramen of Magendie.

Q.17 Para sympathetic fibres from eye are present in which cranial nerve

a) First.
b) Second.
c) Third.
d) Fourth.
e) Fifth.

Q.18 Amygdala is structurally related to:

a) Spinal cord.
b) Pons.
c) Medulla oblongata.
d) Limbic system.
e) Hypophysis cerebri.

Q.19 Which of the following cranial nerve controls the lateral movement of eyeball

a) Olfactory.
b) Optic.
c) Occulomotor.
d) Trigeminal.
e) Abducent.

Q.20 Basilar artery is formed by the union of two:

a) Anterior cerebral arteries.
b) Vertebral arteries.
c) Posterior communicating arteries.
d) Posterior cerebral arteries.
e) Anterior spinal arteries.

Q.21 What proportion of all sensory information is discarded by the brain as irrelevant and unimportant?

a) Less than 40%.
b) 40% to 59%.
c) 60% to 79%.
d) 80% to 99%.
e) More than 99%.

Q.22 You have seen a patient who has presented with intense anxiety. You have prescribed 5 mgs of diazepam three times a day. Which of the following neurotransmitter system is facilitated by diazepam for its anxiolytic effect?

a) Acetylcholine.
b) Epinephrine.
c) Nor epinephrine.
d) GABA.
e) Dopamine.

Q.23 You saw a patient of depression and prescribed 20 mgs of fluoxetine per day. It will inhibit re-uptake of Serotonine from synaptic cleft. What is the width of synaptic cleft?

a) 20 to 30 micrometers.
b) 200 to 300 micrometers.
c) 20 to 30 millimetres.
d) 20 to 30 angstroms.
e) 200 to 300 angstroms.

Q.24 You have seen a patient who is complaining of severe headache. Which type of sensory receptors are involved in pain sensations:

a) Nociceptors.
b) Thermo receptors.
c) Mechanoreceptors.
d) Chemo receptors.
e) Electromagnetic receptors.

Q.25 A patient brings to you a report saying that his dorsal column of spinal cord is affected. Dorsal column transmits following sensations

a) Pain.
b) Temperature.
c) Position sensations from the joints.
d) Tickle and itch.
e) Sexual sensations.

Q.26 Which of the following is found in the brain's opiate system?

a) Morphine.
b) Endorphin.
c) Pethidine.
d) Codeine.
e) Buperinorphine.

Q.27 Nor epinephrine is synthesised from

a) Dopamine.
b) Epinephrine.
c) Serotonine.
d) GABA.
e) Acetylcholine.

Q.28 You have advised dexamethasone suppression test in a depressed patient. You measure cortisol level. Cortisol is secreted from

a) Pituitary gland.
b) Adrenal medulla.
c) Adrenal cortex.
d) Thyroid gland.
e) Hypothalamus.

Q.29 You have seen a patient suffering from narcolepsy. Sleep and wakefulness are controlled by which part of brain?

a) Cerebral cortex.
b) Reticular activating system.
c) Limbic system.
d) Hypothalamus.
e) Internal capsule.

Q.30 You have prescribed procyclidine to a patient who had glaucoma. What is normal intraocular pressure?

a) 45 mm Hg.
b) 35 mm Hg.
c) 25 mm Hg.
d) 15 mmHg.
e) 05 mm Hg.

Q.31 Inhibitory cells situated in spinal cord are known as:

a) Renshaw cells.
b) Golgi cells.
c) GABA cells.
d) Purkinje cells.
e) Dorsal root ganglia.

Q.32 Primary motor cortex lies in:

a) Post central gyrus.
b) Pre central gyrus.
c) Temporal lobe.
d) Broca's area.
e) Area 17 of cerebral cortex.

Q.33 Which part of brain prevents overshooting of movements?

a) Cerebral cortex.
b) Thalamus.
c) Cerebellum.
d) Basal ganglia.
e) Spinal cord.

Q.34 The major area for language comprehension in cerebral cortex is also known as

a) Korsakoff's area.
b) Parkinson's area.
c) Broca's area.
d) Wernicke's area.
e) Auditory area.

Q.35 You have seen a patient whose immediate memory is normal but short-term memory is deranged. The part of brain involved in consolidation of memory is:

a) Thalamus.
b) Putamin.
c) Globus Pallidus.
d) Corpus callosum.
e) Hippocampus.

Q.36 A neurologist refers a patient to you. His MRI scan shows loss of neurons in cerebellum. Loss of the deep cerebellar nuclei commonly causes:

a) Clasp knife rigidity.
b) Cog wheel rigidity.
c) Ankle clonus.
d) Hypertonia.
e) Hypotonia.

Q.37 You have seen a patient whose CT scan shows a brain tumour and his temperature regulatory system is affected. Which part of brain controls the temperature regulation?

a) Tuberous cinerium.
b) Mammilary bodies.
c) Para ventricular area of hypothalamus.
d) Preoptic area of hypothalamus.
e) Infundibulum.

(Continued)

Q.38 Reward and punishment centres are located in which part of brain

a) Spinal cord.
b) Brain stem.
c) Limbic system.
d) Cerebral cortex.
e) Reticular activating system.

Q.39 A patient comes to you with history of fits. His EEG shows theta waves. Frequency of theta waves is:

a) Less than 3.5 cycles per second.
b) 4 to 7 cycles per second.
c) 8 to 13 cycles per second.
d) 14 to 21 cycles per second.
e) More than 21 cycles per second.

Q.40 You have seen a patient who suffers from schizophrenia. You have prescribed typical anti psychotics, which blocks a-adrenergic receptors. Blockage of a-adrenergic receptors causes:

a) Vaso dilatation.
b) Vaso constriction.
c) Pupil dilatation.
d) Tachycardia.
e) Alexithymia.

Q.41 The characteristic transmission in synapse is:

a) There is one-way conduction.
b) Transmission occurs both ways.
c) Transmission is mainly electrical.
d) There are several axons in a neurone.
e) Mitochondria store the neurotransmitter in pre synaptic terminals.

Q.42 You have seen a patient who is complaining of memory loss. Long-term memory requires prolonged changes in neurone, which is achieved by:

a) Opening ion channels in postsynaptic neurone.
b) Activating a second messenger chemical system in the post synaptic neurone.
c) Activating a second messenger chemical system in the pre synaptic neurone.
d) Creating action potential at neuromuscular junction.
e) Making changes in the DNA.

Q.43 Excitation of neurone occurs by

a) Opening of chloride ion channels through the receptor molecule.
b) Increase in the conductance of potassium ions through the receptor.
c) Opening of sodium channels into the interior of the postsynaptic cell.
d) Increased positive charge out side the postsynaptic cell.
e) Increased negative charge inside the postsynaptic neurone.

Q.44 You have seen a 25 years old patient who suffers from schizophrenia. You have prescribed haloperidol, which is dopamine antagonist. Which of the following is an inhibitory neurotransmitter?

a) Acetylcholine.
b) Epinephrine.
c) Nor epinephrine.
d) Glycine.
e) 5HT.

Q.45 Resting membrane potential of the neuronal soma in spinal cord is about:

a) + 35 millivolts.
b) + 65 millivolts.
c) +95 millivolts.
d) —35 millivolts.
e) —65 millivolts.

Q.46 In excitatory postsynaptic potential:

a) There is no change in membrane potential.
b) Membrane potential becomes less positive.
c) Membrane potential becomes more positive.
d) Membrane potential becomes more negative.
e) Membrane potential becomes less negative.

Q.47 In case of pre synaptic inhibition neurotransmitter involved is usually:

a) Dopamine.
b) Acetylcholine.
c) 5HT.
d) GABA.
e) Cytochrome p 450.

Q.48 When the summated post synaptic potential is excitatory but has not risen high enough to reach the threshold for excitation, neurone is said to be:

a) Blocked.
b) Inhibited.
c) Facilitated.
d) Fired.
e) Disinhibited.

Q.49 You have seen a patient suffering from epilepsy. Epileptic fit usually lasts for less than a minute. Most likely mechanism explaining the short duration of fit is:

a) Facilitation of synaptic transmission.
b) Fatigue of synaptic transmission.
c) Excitation of synaptic transmission.
d) Disinhibition of synaptic transmission.
e) Blocking of synaptic transmission.

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Q.50 You have seen a patient who is hyperventilating as a result of intense anxiety. It results in:
a) Increased neuronal excitability.
b) Decreased neuronal excitability.
c) Blocking of neuronal activity.
d) No change in neuronal activity.
e) Respiratory acidosis.

Q.51 When you administer ECT; thiopentone sodium is used as an anaesthetic. It causes:
a) Decreased neuronal excitability.
b) Increased neuronal excitability.
c) Decrease in the convulsion threshold.
d) Metabolic acidosis.
e) Respiratory alkalosis.

Q.52 Synaptic delay is for:
a) 0.05 milliseconds.
b) 0.5 milliseconds.
c) 5 milliseconds.
d) 50 milliseconds.
e) 500 milliseconds.

Q.53 Mechanoreceptors are found in:
a) Retina.
b) Internal ear.
c) Skin.
d) Hypothalamus.
e) Spinal cord.

Q.54 Maximum amplitude of most sensory receptor potential is about
a) 0.1 millivolts.
b) 1 millivolts.
c) 10 millivolts.
d) 100 millivolts.
e) 1000 millivolts.

Q.55 Receptors adapt at a different rate. Which type of sensory receptors takes longest time for adaptation?
a) Pacinian corpuscle.
b) Mechano receptors.
c) Visual receptors.
d) Auditory receptors.
e) Pain receptors.

Q.56 You have seen a 65 years old patient who has presented with memory loss and personality change. If amyloid plaques are present in his brain, most likely diagnosis is:
a) Addison's disease.
b) Kluver Bucy syndrome.
c) Wernicke's encephalopathy.
d) Korsakoff's psychosis.
e) Alzheimer's disease.

Q.57 Acetylcholine is metabolised by the enzyme
a) Catachol O methyl transferase.
b) Choline acetyl transferase.
c) Monoamine oxidase.
d) Acetyl cholinesterase.
e) Acetylcholine dehydrogenase.

Q.58 You have seen a patient with symptoms of episodic anxiety. After investigations he is found to have pheochromocytoma. In adrenal medulla 80% of catecholamines are in the form of
a) Dopamine.
b) Nor epinephrine.
c) Epinephrine.
d) Aldosterone.
e) Cortisol.

Q.59 In adrenal medulla, nor epinephrine is converted to epinephrine by the process of:
a) Hydroxylation.
b) Methylation.
c) Decarboxylation.
d) Acetylation.
e) Oxidation.

Q.60 You have prescribed procyclidine to a patient who developed extra pyramidal symptoms after taking haloperidol. Postganglionic neurones of para sympathetic system act on which receptors
a) Muscrinic.
b) Nicotinic.
c) Alpha.
d) Beta.
e) D-2.

Q.61 You have seen a patient complaining of anxiety. He suffers from bronchial asthma as well. You are thinking about prescribing b-blocker, Propranolol. Bronchodilatation is caused by stimulation of which receptor?
a) Beta $_{2.}$
b) Beta $_{1.}$
c) Alpha $_{1.}$
d) D $_{2.}$
e) 5HT $_{2.}$

Q.62 Sympathetic fibres to most sweat glands are:
a) Adrenergic.
b) Cholinergic.
c) Dopaminergic.
d) Histaminergic.
e) Serotonergic.

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Q.63 You have seen a patient whose CT scan shows a tumour of pituitary gland. Which hormone is secreted from posterior pituitary?

a) ACTH.
b) FSH.
c) LH.
d) ADH.
e) MSH.

Q.64 You have seen a patient who has been diagnosed as having tumour in hypothalamus. Inhibitory factor is secreted from hypothalamus to act on pituitary for which hormone of the pituitary?

a) Oxytocine.
b) Anti diuretic hormone.
c) Leutinising hormone.
d) Growth hormone.
e) Prolactin.

Q.65 Neurotransmitter acting on the tubero infundibular system is:

a) Serotonine.
b) Acetylcholine.
c) Epinephrine.
d) Nor epinephrine.
e) Dopamine.

Q.66 You have been asked to develop a programme of token economy for rehabilitation of patients suffering from schizophrenia. This is theoretically derived from:

a) Cognitive learning.
b) Operant conditioning.
c) Classical conditioning.
d) Psychoanalysis.
e) Supportive psychotherapy.

Q.67 You have seen a 45 years old male who has been consuming excessive amount of alcohol for the last several years. He suffers from Korsakoff's psychosis. Most common type of memory loss in this disorder is:

a) Short term memory.
b) Long-term memory.
c) Digit span.
d) Immediate memory.
e) Remote memory.

Q.68 Which of the following is a secondary reinforcer?

a) Food.
b) Water.
c) Money.
d) Sex.
e) Alcohol.

Q.69 You want to decrease unwanted behaviour of an individual. Which of the following would decrease unwanted behaviour?

a) Positive reinforcement
b) Negative reinforcement
c) Intermittent reinforcement
d) Punishment
e) Partial reinforcement

Q.70 Language based memory is known as:

a) Episodic memory.
b) Perceptual memory.
c) Encoded memory.
d) Confabulation.
e) Semantic memory.

Q.71 A patient presents to you with history of needle phobia. According to theories of learning it can be explained best by:

a) Avoidance learning
b) Observational learning
c) Psychoanalysis
d) Extinction.
e) Mono amine theory.

Q.72 Thinking which is highly private and may use symbols with very personal meanings is known as:

a) Divergent thinking.
b) Autistic thinking.
c) Concrete thinking.
d) Abstract thinking.
e) Directed thinking.

Q.73 According to Maslow's hierarchy of needs, lowest needs level is:

a) Self actualisation.
b) Safety needs.
c) Biological needs.
d) Esteem needs.
e) Love needs.

Q.74 Which theory states that felt emotion and bodily responses are independent events?

a) Watson-Crick theory.
b) Schachter-Singer theory.
c) James-Lang theory.
d) Cannon-Bard theory.
e) Yerkes-Dodson theory.

Q.75 Who did experiments using electric shocks to study the phenomenon of obedience?

a) Bower.
b) Caldwell.
c) Miller.
d) Milner.
e) Milgram.

Q.76 You have seen a child who is exhibiting features of animism, egocentricism, authoritarian morality and pre causal logic. According to Piaget's theory of cognitive development, what is the likely age of the child?

a) Less than 2 years.
b) 2 to 7 years.
c) 7 to 12 years.
d) 12 to 16 years.
e) More than 16 years.

Q.77 You have sent your patient to psychologist for assessment of intelligence. Result is in the form of percentile score. Which test has been most likely administered?

a) WAIS.
b) WISC.
c) WISC-R.
d) Stanford Binet test.
e) Ravens progressive Matrices.

Q.78 You sent a patient to psychologist for IQ assessment. Result says that his score lies at 30th percentile. What does it mean?

a) Patient is of average intelligence.
b) Patient is mildly mentally retarded.
c) Patient is moderately mentally retarded.
d) Patient is severely mentally retarded.
e) Patient is profoundly mentally retarded.

Q.79 You have sent a patient for IQ assessment. Report says that his score is within 2 standard deviations of the mean. If mean is 100 what is the value for one standard deviation?

a) 5.
b) 10.
c) 15.
d) 20.
e) 25.

Q.80 You want to assess the personality of a patient. You have decided to use a projective test. Which of the following is a projective test to assess personality

a) MMPI.
b) Personality assessment schedule.
c) Maudsley personality inventory.
d) Thematic apperception test.
e) The 16 personality factor (16PF) questionnaire.

Q.81 You have received a report of assessment of personality of a patient. It mentions dimensions of introversion, extraversion and high or low neuroticism. Who developed a personality test mentioning these characteristics?

a) Eysenck.
b) Freud.
c) Schneider.
d) Henderson.
e) Kraepelin.

Q.82 You have seen a patient suffering from obsessive compulsive disorder. According to Freud which component of personality is very strong?

a) Ego.
b) Super ego.
c) ID.
d) Preconscious.
e) Unconscious.

Q.83 We use the term inferiority complex in our daily life. Who coined this term initially?

a) Freud.
b) Jung.
c) Adler.
d) Horney.
e) Schneider.

Q.84 Which of the following defence mechanism is most useful considering its consequences:

a) Projection.
b) Reaction formation.
c) Repression.
d) Sublimation.
e) Rationalisation.

Q.85 Which of the following defence mechanism is used in psychosis

a) Rationalisation
b) Displacement
c) Intellectualisation
d) Regression
e) Projection

Q.86 Following is a measure of central tendency

a) Mode.
b) Standard deviation.
c) Variance.
d) Analysis of variance.
e) Range.

Q.87 You are planning a research to compare a new anti depressant with a placebo. Your null hypothesis would be:

a) Anti depressant is better than placebo.
b) There is no difference between antidepressant and placebo.
c) Placebo is better than antidepressant.
d) Results will be null and void.
e) Results are statistically significant.

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Q.88 You are planning a research and you want that every member of population should have an equal chance of being selected in the sample. This sampling is known as:

a) Stratified sampling.
b) Snowball sampling.
c) Random sampling.
d) Convenient sampling.
e) Consecutive sampling.

Q.89 You are doing a research on schizophrenia. For a chronic disorder like schizophrenia

a) Incidence is more than prevalence.
b) Yearly inception rate is more than point prevalence.
c) Prevalence means number of new cases.
d) Prevalence is more than incidence.
e) Incidence and prevalence are equal.

Q.90 If p value is less than 5% it means

a) Results are statistically significant.
b) Results are clinically significant.
c) There is type I error.
d) Null hypothesis is true.
e) Results are not valid.

Q.91 You have referred a patient for counseling. It is best practice:

a) To avoid giving direct advice to clients.
b) To write down everything discussed.
c) To take the fee before the session.
d) That clinical psychologist should do it.
e) To have sessions every week.

Q.92 You should take consent from the patient before treatment. This is according to the ethical principle of:

a) Justice.
b) Autonomy.
c) Good Samaritan.
d) Honesty.
e) Humility.

Q.93 Confidentiality may be broken in following circumstance:

a) Patient refuses to pay the fee.
b) Head of your department orders you to do it.
c) Relatives request for it.
d) Patient has died.
e) Court orders you to do it.

Q.94 When patient does not have the capacity to decide about the treatment you should:

a) Ask for second opinion.
b) Not treat the patient.
c) Refer the patient to some one else.
d) Work in the best interest of the patient.
e) Seek permission from relatives.

Q.95 Following is a relatively culture free IQ test:

a) WAIS.
b) WISC.
c) Ravens progressive Matrices.
d) Stanford Binet test.
e) Mini mental state.

Q.96 A young woman of Azad Kashmir is in psychological distress after being badly injured in earthquake. One of her distant uncles has also been killed in the disaster. She is most likely to be in a state of:

a) Developmental crisis.
b) Situational crisis.
c) Family crisis.
d) Economic crisis.
e) Social crisis.

Q.97 An 18 years old girl with a dissociative (hysterical) disorder is admitted in psychiatry ward. A few days later she insists on repeated examination by a young male doctor. Most likely she has developed a state called:

a) Rapport.
b) Dependence.
c) Confidence.
d) Transference.
e) Learning.

Q.98 After physical examination and investigation a 42 years old businessman has been told that he has advanced carcinoma of liver. After 2 hours the doctor on his revisit observes that he is completely relaxed and happy. The patient is most likely exhibiting:

a) Strong nerves.
b) Patience.
c) Denial.
d) Tolerance.
e) Hiding the anxiety consciously.

Q.99 A 20 years old girl presents to a doctor with amnesia. She has failed in recent examination. There is no organic cause for amnesia. She probably has:

a) Fear.
b) Confusion.
c) Frustration.
d) Shock.
e) Dissociation.

Q.100 The most stressful event for a 55 years old government servant according to Holmes and Rahe is:

a) Death of spouse.
b) Retirement.
c) Robbery at home.
d) Marriage of his son.
e) Accidental injury.