

DAFLA ACADEMY

THE BEST COACHING CENTRE FOR PHARMACIST...
SIVAMANI STREET, NARAYANAPURAM, MADURAI-625 014

PHONE 8270 903 903 900 375 2005

**TAMIL NADU PUBLIC SERVICE COMMISSION
SYLLABUS
PHARMACY/ PHARMACEUTICAL SCIENCES
(UG DEGREE STANDARD)
Code:4290**

UNIT-I:

1) **Historical background and development of profession of pharmacy:**

History of profession of Pharmacy in India in relation to pharmacy education, industry and organization, Pharmacy as a career, Pharmacopoeias: Introduction to IP, BP, USP and Extra Pharmacopoeia.

2) **Calculations:**

Posology: Dose calculations based on age, body weight and surface area.

Pharmaceutical calculations: Percentage solutions, Alligation, Proof spirit and isotonic solutions based on freezing point and molecular weight.

3) **Surface & interfacial Phenomenon:**

Measurement of surface and interfacial tensions, spreading coefficient, surface active agents, HLB Scale, solubilisation and Detergency

4) pH, buffers and isotonic solution: pH determination, applications of buffers, buffer equation, buffer capacity and buffered isotonic solutions.

5) Unit Operations: Size reduction, size separation, mixing, filtration, centrifugation evaporation, drying, distillation, heat transfer, compression and Tablet coating.

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6) Coarse Dispersion:

Suspension, interfacial properties of suspended particles, settling in suspensions, formulation of flocculated and deflocculated suspension. Emulsions and theories of emulsification, micro emulsion and multiple emulsion, stability of emulsions, preservation of emulsions, rheological properties of emulsions and emulsion formation by HLB method.

6) **Micromeritics:** Particle size distribution, mean particle size, number and weight distribution, particle number, methods of determining particle size by different methods, specific surface, methods of determining surface area and derived properties of powders.

8) **Pre-formulation studies:** Introduction to pre-formulation, goals and objectives, study of physicochemical characteristics of drug substances

a. Physical Properties: Crystal & amorphous form, particle size, shape, flow properties, solubility profile (Pka, pH, Partition co-efficient) Polymorphism.

b. Chemical properties: Hydrolysis, Oxidation, reduction racemisation, polymerisation. BCS classification of drugs and its significant Application of preformulation considerations in the development of solid, liquid oral and parenteral dosage forms and its impact on stability of dosage forms.

9) **Pharmaceutical Excipients** – Used in Liquid, Semisolids and solid dosage forms.

10) **Quality Control Tests and Evaluation parameters of the following formulations:** Solid dosage forms, Semi solids, Liquid dosage forms, Parenteral, Ophthalmic preparation and Pharmaceutical Aerosols.

11) **Cosmetics:** Formulation and preparation of the following cosmetics preparations? Lipsticks, Shampoos, Cold Cream, Vanishing Cream, Tooth Paste, Hair Dyes and Sunscreens.

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12)Packaging Material Sciences: Materials used for packaging of Pharmaceutical Products, factors influencing choice of containers, legal and official requirement for containers, Quality control tests for containers and rubber closures.

13)Bio availability and Bioequivalence: Definitions and objectives of Bioavailability, absolute and relative bioavailability, measurement of bioavailability in-vitro drug dissolution models, in-vitro-in-vivo correlations, bioequivalence studies, methods to enhance dissolution rates and bioavailability of poorly soluble drugs.

14)Pharmacokinetics: Definition and introduction to Pharmacokinetics, Compartment models, Non-compartment models, Physiological models, One compartment open model

- a) Intravenous Injection (bolus)
- b) Intravenous infusion
- c) Extra vascular administrations.

Pharmacokinetic parameters - KE , $T_{1/2}$, V_d , AUC , K_a , CL_t and CL_R – definitions, methods of elimination, understanding of their significance and application.

15)Good manufacturing practices (GMP)

16)Good Laboratory practices (GLP): Organisation and personnel, Facilities, equipment, Testing facilities operation, Test and control articles, Protocol for conduct of a Nonclinical Laboratory Study, Records and reports, Disqualification of Testing facilities.

17)Warehousing: Good Warehousing practice, Materials Management.

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18)Pilot Plant Scale up Techniques: General considerations – including significance of personnel requirements, space requirements, raw materials, Pilot plant scale up considerations for solids, liquid orals, semi solids and relevant documentation, SUPAC guidelines, Introduction to platform technology.

19) Quality management systems: Quality management and certification: concept of quality, Total quality management, Quality by Design (QbD), six sigma concept, out of specifications (OOS) change control, Introduction to ISO 9000 series of quality system standards, ISO 14000, NABL.

20)Indian Regulatory Requirements: Central Drug Standard Control Organisation (CDSCO) and State Licensing Authority, Organisation, Responsibilities, Certificate of Pharmaceutical products (COPP) Regulatory requirements and approval procedures for New drugs.

21)Over the counter (OTC) Sales: Introduction and sale of over the counter and Rational use of common over the counter medications.

22)Drug Store Management and Inventory Control: Organisation of Drug Store, types of materials stocked and storage conditions. Purchase and inventory control: Principles, Purchase procedures, Purchase order, Procurement and stocking, Economic order quantity, Reorder quantity level and methods used for the analysis of the drug expenditure.

23)Novel Drug Delivery Systems: Ocular Drug Delivery Systems, Transdermal Drug Delivery Systems, Implantable Newer Drug Delivery Systems, Targeted Drug Delivery and Controlled Drug Delivery Systems.

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UNIT-II:

1) Study of principle, procedure, merits, demerits and applications of physical, chemical, gaseous, radiation and mechanical method of sterilization. Evaluation of the efficiency of sterilization methods. Sterility indicators.

2) Classification and mode of action of disinfectants, factors influencing disinfection, antiseptics and their evaluation, for bacteriostatic and bactericidal actions. Sterility Testing of Products (solids, liquids, Ophthalmic and other Sterile products) according to IP, BP and USP

3) Principles and methods of different microbiological assay. Methods for standardization of Antibiotics, Vitamins and Amino acids.

4) Types of immunity - humoral immunity, cellular immunity

5) Blood products and Plasma Substitutes: Collection, Processing and Storage of whole human blood, dried human plasma, plasma Substitutes

6) Fermentation methods and general requirements, study of media, equipments, sterilization methods, aeration process, stirring. Large scale production fermenter design and its various controls. Study of the production of - Penicillins, Citric acid, Vitamin B12, Glutamic acid, Griseofulvin.

UNIT-III:

1) Atomic structure and valency, Radioactivity, Radio isotopes and Pharmaceutical applications of Radio Pharmaceuticals, hazards and precautions.

2) Sources of impurities in Pharmaceutical substances; Limit test as per I.P; Fundamentals of volumetric Analysis. Errors: Sources, types, methods of minimizing errors, Accuracy, Precision, significant figures.

3) A systematic study of inorganic compounds for their preparation, assay and use which includes Gastrointestinal agents, Topical agents and Dental products.

4) Preparation and use of Chemical reagents and Volumetric Solutions as per Pharmacopeia in Pharmaceutical Analysis.

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5) Metal hydride reduction, Wolff kishnar reduction, Clemenson's reduction, Beckmann and Schmidt rearrangement, Oppenauer Oxidation, Claisen-Schmidt condensation.

UNIT-IV:

1) Chemistry, synthesis and Medicinal uses of the following categories of drugs -Local Anaesthetics, Drugs acting on CNS, ANS, CVS, Anti-infective agents like Sulphonamides, Antibiotics, AntiTB, Anti-Viral, Antiprotozoal, Antifungal, Antimalarials, Antineoplastic agents, Antihistaminics, Diuretics.

2) QSAR studies, various approaches in drug design.

UNIT-V:

a) Principles and Pharmacopeial Assay Procedures involving Non-aqueous Titration, Redox, Diazotization, complexometric methods, electrometric titration, gravimetric analysis.

b) Chromatography- TLC, Column, Paper, GC, Ion exchange, HPLC, HPTLC, Gel electrophoresis.

c) Theory, principle, instrumentation and applications of colorimetry, UV-Visible Spectrophotometry, Spectrofluorimetry, Nepheloturbidometry, IR, Mass, NMR, RIA, Polarimetry, Refractometry, Thermal method of analysis TGA, DSC, DTA, atomic absorption spectroscopy.

d) ICH guidelines- Calibration and validation, calibration of electronic balance, UV spectrophotometer, IR spectrophotometer, Fluorimeter, HPLC, GC, Flame photometer.

UNIT-VI :

a. General Pharmacology:-

Definition, Sources of drugs, essential drugs concept, routes of drug administration, agonist, antagonist, membrane transport, absorption, distribution, metabolism and excretion of drugs. Enzyme induction, enzyme inhibition.

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Principles and mechanism of drug action, Classification of receptors, drug receptor interactions, Signal transduction mechanisms, dose response relationship, therapeutic index, combined effects of drug & factors modifying drug action. Adverse drug reactions, Drug interactions, Drug discovery and clinical evaluation of new drugs, Pharmacovigilance.

b. Pharmacology of Drugs acting on central nervous system:

General anaesthetics and Pre anaesthetic medication, Sedatives and Hypnotics, centrally acting muscle relaxants, Anti- epileptics, Alcohols and disulfiram, Anti-Psychotics, Anti-depressants, anti-anxiety agents, anti-manics and hallucinogens, Drugs used in Parkinson's disease and Alzheimer's disease, CNS-Stimulants and nootropics, Opioid analgesics and antagonists, Drug Addiction, drug abuse, drug tolerance and drug dependence.

c. Pharmacology of Drugs acting on Peripheral nervous system:

Neurohumoral transmission in Autonomic nervous system, Para Sympathomimetics, Parasympatholytics, Sympathomimetics, Sympatholytics, neuromuscular blocking agents, Skeletal muscle relaxants (peripheral), Local anaesthetic agents, Drug used in Myasthenia gravis and glaucoma.

d. Pharmacology of Drugs acting on cardio vascular system: Drugs used in congestive heart failure, Anti-hypertensive drugs, Anti-Anginal Drugs, Anti-arrhythmic drugs, Anti-hyperlipidemic drugs, Drugs used in the therapy of shock, Hematinics, Coagulants and anti-coagulants, Fibrinolytics and anti-platelet drugs, Plasma Volume expanders.

e. Pharmacology of drugs acting on urinary system:

Diuretics and Anti-diuretics.

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f. Pharmacology of drug acting on respiratory system:

Anti-asthmatic drugs, Drugs used in the management of COPD[Chronic Obstructive Pulmonary disease], Expectorants, anti-tussives, nasal decongestants, Respiratory Stimulants.

g. Immuno Pharmacology: Immuno stimulants, immuno suppressants, bio-similars.

h. Bio-assay:Principles and applications of Bio-assay, types of bio-assay, bio-assay of insulin, oxytocin, Vasopressin, ACTH, d-tubocurarine, digitalis, histamine and 5 HT.

i. Chrono Pharmacology:Definition of rhythm and cycles, Biological clock and it's significance

UNIT-VII:

a) Pharmacology of Drugs acting on the Gastrointestinal tract:Anti-ulcer agents, Drugs for constipation and diarrhoea, appetite stimulants and Suppressants, Digestants and carminatives, Emetics and anti-emetics.

b) Pharmacology of drugs acting on endocrine system:

Anterior Pituitary hormones – analogues and their inhibitors,Thyroid hormones?analogues and their inhibitors, Parathormone, Calcitonin, Vitamin-D, Insulin, oral-hypo glyceic agents and glucagon. Adrenocorticotropic hormone [ACTH] and corticosteroids, Androgens and Anabolic Steroids, Estrogens, Progesterone, Oral Contraceptives. Drugs acting on uterus.

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c) Autocoids and related drugs:

Histamine, 5-HT and their antagonists, Prostaglandins, Thromboxanes and Leukotrienes, Angiotensin, Bradykinin and Substance-P, Non-Steroidal anti-inflammatory drugs, Anti-gout drugs, Anti-rheumatic drugs.

d) Chemotherapy :

General Principles of chemotherapy, Sulfonamides and co-trimoxazole, Antibiotics: Penicillins, Cephalosporins, Chloramphenicol, macrolides, Quinolones and fluoroquinolones, tetracycline and amino glycosides, Anti-tubercular agents, Anti-leprotic agents, Anti-fungal agents, Anti-viral drugs, Anthelmintics, Anti-malarial drugs, Anti-amoebic agents, Urinary tract infection and sexually transmitted diseases, Chemotherapy of malignancy.

e) Principles of toxicology:

Acute, Sub-acute, Chronic toxicity, genotoxicity, carcinogenicity, teratogenicity, mutagenicity, General Principles of treatment of poisoning, clinical symptoms and management of barbiturates, morphine, organophosphorus compound, lead, mercury and arsenic poisoning.

UNIT-VIII:

(a) Alphabetical, Morphological, Taxonomical, Chemical and Pharmacological classification of crude drugs.

(b) Adulteration of drugs of natural origin, Evaluation by Organoleptic, Microscopic, Physical, Chemical and Biological methods.

(c) Plant hormones and their applications.

(d) Types of plant tissue culture, nutritional requirements, growth and their maintenance. Application of plant tissue culture in pharmacognosy.

(e) Brief study of basic metabolic pathways and formation of different Secondary metabolites through these pathways - Shikimic acid pathway, Acetate mevalonate pathway.

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UNIT-IX:

(a) General introduction, composition, chemistry and chemical classification, general methods of extraction and analysis, bio-sources, therapeutic uses and commercial application of following Secondary metabolites.

Alkaloids	: Vinca, Rauwolfia, Belladonna, Opium
Cardiac glycosides	: Steroids
and Triterpenoids	: Liquorice, Dioscorea, Digitalis
Volatile oils	: Mentha, Clove, Cinnamon, Fennel,
Coriander	Tannins : Black & Pale catechu
Resins	: Benzoin, Ginger, Asafoetida, Colophony
Glycosides	: Senna, Aloes

(b) Isolation, Identification & Analysis of following Phytoconstituents

- i) Terpenoids : Menthol, Citral, Artemisin
- ii) Glycosides : Glycyrrhetic acid, Rutin
- iii) Alkaloids : Atropine, Quinine, Reserpine, Caffeine
- iv) Resins : Podophyllotoxin, Curcumin

(c) Modern methods of extraction, application of latest techniques like Spectroscopy, Chromatography and Electrophoresis in isolation, purification and identification of Crude drugs.

(d) Basic principles involved in Homeopathy systems of medicine.

UNIT-X:

(a) The Drugs and Cosmetics Act, 1940 and Drugs Rules 1945 (As Amended from time to time)

(b) The Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 and Rules, 1955 (As Amended from time to time)

(c) The Drugs (Price Control) Order 2013 (As Amended from time to time)

(d) The Narcotic Drugs and Psychotropic substances Act and Rules, 1985 (As Amended from time to time)

(e) The Pharmacy Act, 1948 (As Amended from time to time)

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General Studies (Degree Standard) (Objective Type) Subject Code: 003

UNIT-I : GENERAL SCIENCE

(i) Scientific Knowledge and Scientific temper - Power of Reasoning- Rote Learning Vs Conceptual Learning - Science as a tool to understand the past, present and future.

(ii) Nature of Universe - General Scientific Laws – Mechanics -Properties of Matter, Force, Motion and Energy - Everyday application of the basic principles of Mechanics, Electricity and Magnetism, Light, Sound, Heat, Nuclear Physics, Laser, Electronics and Communications.

(iii) Elements and Compounds, Acids, Bases, Salts, Petroleum Products, Fertilizers, Pesticides.

(iii) Main concepts of Life Science, Classification of Living Organisms, Evolution, Genetics, Physiology, Nutrition, Health and Hygiene, Human diseases.

(iv) Environment and Ecology.

UNIT-II: CURRENT EVENTS

(i) History - Latest diary of events - National symbols - Profile of States - Eminent personalities and places in news – Sports - Books and authors.

(ii) Polity - Political parties and political system in India - Public awareness and General administration - Welfare oriented Government schemes and their utility, Problems in Public Delivery Systems.

(iii) Geography - Geographical landmarks.

(iv) Economics - Current socio - economic issues.

(v) Science - Latest inventions in Science and Technology.

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UNIT- III: GEOGRAPHY OF INDIA

(i) Location – Physical features - Monsoon, rainfall, weather and climate - Water resources - Rivers in India - Soil, minerals and natural resources - Forest and wildlife - Agricultural pattern.

(ii) Transport - Communication.

(iii) Social geography – Population density and distribution - Racial, linguistic groups and major tribes.

(iv) Natural calamity – Disaster Management – Environmental pollution: Reasons and preventive measures – Climate change – Green energy.

UNIT – IV: HISTORY AND CULTURE OF INDIA

(i) Indus valley civilization - Guptas, Delhi Sultans, Mughals and Marathas - Age of Vijayanagaram and Bahmani Kingdoms -South Indian history.

(ii) Change and Continuity in the Socio - Cultural History of India.

(iii) Characteristics of Indian culture, Unity in diversity – Race, language, custom.

(iv) India as a Secular State, Social Harmony.

UNIT-V: INDIAN POLITY

(i) Constitution of India - Preamble to the Constitution - Salient features of the Constitution - Union, State and Union Territory.

(ii) Citizenship, Fundamental rights, Fundamental duties, Directive Principles of State Policy.

(iii) Union Executive, Union legislature – State Executive, State Legislature – Local governments, Panchayat Raj.

(iv) Spirit of Federalism: Centre - State Relationships.

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(v) Election - Judiciary in India – Rule of law.

(vi) Corruption in public life – Anti-corruption measures – Lokpal and LokAyukta - Right to Information - Empowerment of women - Consumer protection forums, Human rights charter.

UNIT-VI: INDIAN ECONOMY

(i) Nature of Indian economy – Five year plan models - an assessment – Planning Commission and Niti Ayog.

(ii) Sources of revenue – Reserve Bank of India – Fiscal Policy and Monetary Policy - Finance Commission – Resource sharing between Union and State Governments - Goods and Services Tax.

(iii) Structure of Indian Economy and Employment Generation, Land reforms and Agriculture - Application of Science and Technology in agriculture - Industrial growth - Rural welfare oriented programmes – Social problems – Population, education, health, employment, poverty.

UNIT-VII: INDIAN NATIONAL MOVEMENT

(i) National renaissance – Early uprising against British rule - Indian National Congress - Emergence of leaders – B.R.Ambedkar, Bhagat Singh, Bharathiar, V.O.Chidambaranar, Jawaharlal Nehru, Kamarajar, Mahatma Gandhi, Maulana Abul Kalam Azad, Thanthai Periyar, Rajaji, Subash Chandra Bose and others.

(ii) Different modes of Agitation: Growth of Satyagraha and Militant movements.

(iii) Communalism and partition.

UNIT- VIII : History, Culture, Heritage and Socio - Political Movements in Tamil Nadu

(i) History of Tamil Society, related Archaeological discoveries, Tamil Literature from Sangam age till contemporary times.

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(ii) Thirukkural :

- (a) Significance as a Secular literature
- (b) Relevance to Everyday Life
- (c) Impact of Thirukkural on Humanity
- (d) Thirukkural and Universal Values - Equality,

Humanism, etc

- (e) Relevance to Socio - Politico - Economic affairs
- (f) Philosophical content in Thirukkural

(iii) Role of Tamil Nadu in freedom struggle - Early agitations against British Rule - Role of women in freedom struggle.

(iv) Evolution of 19th and 20th Century Socio-Political movements in Tamil Nadu - Justice Party, Growth of Rationalism - Self Respect Movement, Dravidian movement and Principles underlying both these movements, Contributions of Thanthai Periyar and Perarignar Anna.

UNIT – IX : Development Administration in Tamil Nadu

(i) Human Development Indicators in Tamil Nadu and a comparative assessment across the Country – Impact of Social Reform movements in the Socio - Economic Development of Tamil Nadu.

(ii) Political parties and Welfare schemes for various sections of people – Rationale behind Reservation Policy and access to Social Resources - Economic trends in Tamil Nadu – Role and impact of social welfare schemes in the Socio - economic development of Tamil Nadu.

(iii) Social Justice and Social Harmony as the Cornerstones of Socio - Economic development.

(iv) Education and Health systems in Tamil Nadu.

(v) Geography of Tamil Nadu and its impact on Economic growth.

(vi) Achievements of Tamil Nadu in various fields.

(vii) e-governance in Tamil Nadu.

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UNIT-X: APTITUDE AND MENTAL ABILITY

(i) Simplification – Percentage - Highest Common Factor (HCF) -Lowest Common Multiple (LCM).

(ii) Ratio and Proportion.

(iii) Simple interest - Compound interest - Area - Volume - Time and Work.

(iv) Logical Reasoning - Puzzles-Dice - Visual Reasoning - Alpha numeric Reasoning – Number Series.

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PAPER -II
SYLLABUS FOR WRITTEN EXAMINATION
Part-A

கட்டாய தமிழ்மொழி தகுதித் தேர்விற்கான பாடத் திட்டம்

(கொள்குறி வினாவிற்கான தலைப்புகள்)

பத்தாம் வகுப்பு தரம்

1. பிரித்தெழுதுதல் / சேர்த்தெழுதுதல்.
2. எதிர்ச்சொல்லை எடுத்தெழுதுதல்.
3. பொருந்தாச் சொல்லைக் கண்டறிதல்.
4. பிழைதிருத்தம் (i) சந்திப்பிழையை நீக்குதல் (ii) மரபுப்பிழைகள், வழுவச் சொற்களை நீக்குதல் / பிறமொழிச் சொற்களை நீக்குதல்.
5. ஆங்கிலச் சொல்லுக்கு நேரான தமிழ்ச் சொல்லை அறிதல்.
6. ஒலி மற்றும் பொருள் வேறுபாடறிந்து சரியான பொருளையறிதல்.
7. ஒரு பொருள் தரும் பல சொற்கள்.
8. வேர்ச்சொல்லைத் தேர்வு செய்தல்.
9. வேர்ச்சொல்லைக் கொடுத்து / வினைமுற்று, வினையெச்சம், வினையாலணையும் பெயர், தொழிற்பெயரை / உருவாக்கல்.
10. அகரவரிசைப்படி சொற்களை சீர் செய்தல்.
11. சொற்களை ஒழுங்குப்படுத்தி சொற்றொடராக்குதல்.
12. இரு வினைகளின் பொருள் வேறுபாடு அறிதல்.
(எ.கா.) குவிந்து-குவித்து
13. விடைக்கேற்ற வினாவைத் தேர்ந்தெடுத்தல்.

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14. எவ்வகை வாக்கியம் எனக் கண்டெழுதுதல் - தன்வினை, பிறவினை, செய்வினை, செய்ப்பாட்டு வினை வாக்கியங்களைக் கண்டெழுதுதல்.
15. உவமையால் விளக்கப்பெறும் பொருத்தமான பொருளைத் தேர்ந்தெழுதுதல்
16. அலுவல் சார்ந்த சொற்கள் (கலைச்சொல்)
17. விடை வகைகள்.
18. பிறமொழிச் சொற்களுக்கு இணையான தமிழ்ச் சொற்களைக் கண்டறிதல் (எ.கா.) கோர்டு பிஸ்கட் - தங்கக்கட்டி.
19. ஊர்ப் பெயர்களின் மருஉவை எழுதுக (எ.கா.) தஞ்சாவூர் - தஞ்சை
20. நிறுத்தற்குறிகளை அறிதல்.
21. பேச்சுவழக்கு, எழுத்துவழக்கு (வாரான் - வருகிறான்).
22. சொற்களை இணைத்து புதிய சொல் உருவாக்கல்.
23. பொருத்தமான காலம் அமைத்தல் (இறந்தகாலம், நிகழ்காலம், எதிர்காலம்).
24. சரியான வினாச்சொல்லைத் தேர்ந்தெடு.
25. சரியான இணைப்புச் சொல் (எனவே, ஏனெனில், ஆகையால், அதனால், அதுபோல).
26. அடைப்புக்குள் உள்ள சொல்லைத் தகுந்த இடத்தில் சேர்க்க.
27. இருபொருள் தருக.
28. குறில் - நெடில் மாற்றம், பொருள் வேறுபாடு.
29. கூற்று, காரணம் - சரியா? தவறா?
30. கலைச் சொற்களை அறிதல் :-
எ.கா. - Artificial Intelligence - செயற்கைநுண்ணறிவு
Super Computer - மீத்திறன் கணினி

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31. பொருத்தமான பொருளைத் தெரிவு செய்தல்
32. சொற்களின் கூட்டுப் பெயர்கள் (எ.கா.) புல் -புற்கள்
33. சரியான தொடரைத் தேர்ந்தெடுத்தல்
34. பிழைதிருத்துதல் (ஒரு-ஓர்)
35. சொல் - பொருள் - பொருத்துக
36. ஒருமை-பன்மைபிழை
37. பத்தியிலிருந்து வினாவிற்கான சரியான விடையைத் தேர்ந்தெடு.

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