

### TAMIL NADU PUBLIC SERVICE COMMISSION

NOTIFICATION NO: 05/2017 DATED: 22.02.2017 ADVERTISTMENT NO::460

Applications are invited <u>only through online mode</u> upto 21.03.2017 for direct recruitment to the vacancies in the following posts

It is mandatory for the Applicants to register their basic particulars through one time online registration system on payment of Rs.50/- towards registration fee and then should apply online for this recruitment.

OHILL	Online for this recruitment.							
SI. No	Name of the Post, Department and Post Code	Name of the Service and Code No.	No. of vacancies	Scale of pay				
1	Assistant Geologist in Geology and Mining Department (2015-2016) (Post Code:1863)	Tamil Nadu Geology & Mining Subordinate Service (Code No.038)	25					
2	Assistant Geologist in PWD (2014-2015) (Post Code:1750)	Tamil Nadu Engineering Subordinate Service (Code No.029)	15	Rs.9300-				
3	Assistant Geologist in Agricultural Engineering Department (2013-2014 &2014-2015) (Post Code1677)	Tamil Nadu Agricultural Engineering Subordinate Service (Code No.014))	10	34,800 (PB2) + 5100/- Grade Pay				
4	Geologist in Highways Department (2012-2013) (Post Code:1873)	Tamil Nadu Highways Engineering Subordinate Service (Code No.042)	3					

### 2. <u>DISTRIBUTION OF VACANCIES</u>:-

SI. No.	Name of the posts Department	GT (G)	GT (G) (PSTM)	GT (W)	GT (W)(PSTM)	<b>GT (О</b> ВТНО)	BC (G)	BC (PSTM)	BC (W)	BC (W)(PSTM)	BC(M)	BC(M)(W)	MBC /DC (G)	MBC/DC(G)(PSTM)	MBC / DC (W)	(9) 2S	SC(G)(PSTM)	sc (w)	SC(A)(G) (PSTM)	SC(A)(W) (PSTM)	Total
1	Assistant Geologist in Geology and Mining Department	3	1	2	-	1	4	1	2	-	1	-	3	1	1	2	1	1	1	-	25
2	Assistant Geologist in Public Works Department	2	1	-	1	-	3	-	-	1	-	1	3	-	1	2		-	-	-	15
3	Assistant Geologist in Agricultural Engineering Department	1	1	-	-	-	1	1	1	-	1	-	1	1	-	1	1	1	-	-	10
4	Geologist in Highways Department	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	3

GT – General Turn, G- General, W - Women; PSTM - Persons Studied in Tamil Medium; M-Muslim, SC (A) – Scheduled caste (Arunthathiyar)

### 3. IMPORTANT DATES:-

Α	Date of Notification	n	22.02.2017	
В	Last date for subr	nission of applications	21.03.2017	
С	Last date for payr of India/Indian ba	ment of Fee through Bank (State Bank nk)	23.03.2017	
	Date of Examination	Paper-I(Geology) (Degree Standard)	24.06.2017	10.00 A.M.to 01.00 P.M.
D		Paper-II(General Studies) (Degree Standard)	24.06.2017	02.30 P.M.to 04.30 P.M
		Paper-I(Geology) (P.G. Degree Standard)	25.06.2017	10.00 A.M.to 01.00 P.M.

### 4. <u>FEES</u>:-

a)	Registration Fee	
	For one time Registration	Rs.50/-
	<b>Note:</b> Applicants who have already registered in one time Registration system paying Rs.50/- are exempted from paying the registration fee for this recruitment.	
b)	Written Examination Fee	
	Note: The Written Examination fee should be paid at the time of submitting the online application for this recruitment if they are not eligible for the concession noted below	Rs.100/-

### **EXAMINATION FEE CONCESSION:-**

Category	Concession	Condition
(i) Scheduled Castes / Scheduled Caste (Arunthathiyars), Scheduled Tribes	Full Exemption	
(ii) Differently Abled Persons, Destitute Widow of all communities	Full Exemption	<ul> <li>(i) For Differently abled persons, the disability should be not less than 40%.</li> <li>(ii) For DWs, the DW certificate should have been obtained from the RDO / Sub Collector.</li> </ul>
(iii) Most Backward Class / Denotified Communities, Backward Classes (Other than Muslim), Backward class (Muslim)	Those who have not availed three free chances so far in any of the previous recruitments may avail exemption from payment of examination fee.	<ul><li>(i) For degree holders only.</li><li>(ii) Should not have availed three free chances in any of the previous recruitments.</li></ul>
(iv) Ex-Servicemen	Those who have not availed two free chances so far in any of the previous recruitments may avail exemption from payment of examination fee.	<ul><li>(i) Should not have availed two free chances in any of the previous recruitments.</li><li>(ii) Fee concession will not apply to those who have already been recruited to any class or service or category.</li></ul>

- i) The three / two free chances referred to above are not for **EACH POST** but for **ANY THREE / TWO APPLICATIONS ONLY**. The claim for exemption from payment of examination fee made in any application which is rejected / admitted or withdrawn will be counted as a free chance availed.
- ii) Failure to pay the prescribed fee along with the application in-time will be liable to rejection of application.
- iii) If the fee concession claimed in the application exceeds the admissible limits announced above the application will be rejected.

(For further details regarding Fee Concession, refer para 12 of "Instructions to Applicants")

### 5. QUALIFICATIONS:-

### (A). AGE (As on 01.07.2017)

SI. No	Name of the post	Category of Applicants	Maximum Age	Minimum Age (Should have completed)
	Assistant Geologist in Geology and	SCs, SC(A)s, STs, MBCs/DCs, BCs (OBCM)s, BCMs and DWs of all castes	No Maximum Age Limit	
1	Mining Department	"Others" [i.e. Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs]	30 Years (Should not have completed)	
	Assistant Geologist	SCs, SC(A)s, STs, MBCs/DCs, BCs (OBCM)s, BCMs and DWs of all castes	No Maximum Age Limit	
2	2 Geologist in PWD	"Others" [i.e. Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs]	30 Years (Should not have completed)	
		SCs, SC(A)s, STs, MBCs/DCs, BCs (OBCM)s, BCMs and DWs of all castes	No Maximum Age Limit	40.7/2.22
3	Assistant Geologist in Agricultural Engineering Department	"Others" [i.e. Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs]	30 Years (Should not have completed) Provided that in the case of candidates who possess the B.Sc (Hons) or M.Sc degree in Geology and who have experience for a period of not less than three years in Geophysical Survey or Electrical Logging, the upper age limit shall be increased by five years.	18 Years
	Geologist	SCs, SC(A)s, STs, MBCs/DCs, BCs (OBCM)s, BCMs and DWs of all castes	33 Years (Should not have completed)	
4	in Highways Department	"Others" [i.e. Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs]	30 Years (Should not have completed)	

### AGE CONCESSION

### (i) For Differently Abled Persons:

Differently Abled Persons are eligible for age concession upto 10 years over and above the maximum age limit prescribed above.

### (ii) For Ex-servicemen

- (a) No maximum age limit for the Applicants who belong to SC,SC(A),ST, MBC/DC, BC and BCM, for the post of Assistant Geologist in Geology and Mining, Public Works and Agricultural Engineering Departments only. The maximum age limit is 53 years for who belongs to SC,SC(A),ST, MBC/DC, BC and BCM, for the post of Geologist in Highways Department
- (b) The maximum age limit is 48 years for "others" (i.e) Applicants not belonging to any of the above said categories. This concession will not apply to the Applicants those who have already been recruited to any class or service or category.

### Note:

- i. "Others" i.e., Applicants not belonging to SC's, SC(A')s, ST's, MBC's/DC's, BC's and BCM's who have put in 5 years and more of service in the State / Central Government are not eligible to apply even if they are within the age limit.
- ii. Instructions given with regard to maximum age limit under para. 5 of the 'Instructions to Applicants' will apply to the posts of Assistant Geologist in Geology and Mining Department Assistant Geologist in PWD and Assistant Geologist in Agricultural Engineering Department. But, will not apply to the post of Geologist in Highways.

### (B) EDUCATIONAL QUALIFICATION: (As on 22.02.2017)

Applicants should possess the following or its equivalent qualification:-

Name of the post	Educational Qualification			
Assistant Geologist in Geology and Mining	"A degree of M. Sc in Geology of any recognised University or Institution.			
Department	Other things being equal preference will be given to candidates who possess practical experience in field work.			
Assistant Geologist in PWD	Master of Science degree in Geology or Master of Science degree in applied Geology or Master of Science (Technology) in Hydrogeology of any University recognized by the University Grants Commission.			
Assistant Geologist in Agricultural Engineering Department	"A degree in Geology of any recognised University or Institution"			
Geologist in Highways Department	M.Sc., Degree in Geology			

### Note:-

- (i) The qualification prescribed for the post should have been obtained by passing the required qualification in the order of studies 10<sup>th</sup> + HSC/Diploma or its equivalent +U.G. degree+ P.G. Degree. The results of exam should have been declared on or before the date of notification.
- (ii) Applicants claiming equivalence of qualification to the prescribed qualification should upload and submit evidence for equivalence of qualification in the form of G.O. issued prior to the date of this notification when called for. Failing which their application will be summarily rejected. The G.O's issued regarding equivalence of prescribed qualification after the date of this notification will not be accepted.

(Refer para. 10 of the 'Instructions to Applicants' and Annexure-I to this Notification)

### (C) CERTIFICATE OF PHYSICAL FITNESS:-

Applicants selected for appointment to the above said post will be required to produce a certificate of physical fitness in the form prescribed below before his appointment:

Name of the Post	Standard of Vision Prescribed	Form of Certificate of Physical Fitness
Assistant Geologist in Geology and Mining Department	Standard – III or Better	Form prescribed for Other than Executive and Ministerial Posts
Assistant Geologist in PWD	Standard – III or Better Vision – Colour Blindness will be a disqualification	Form prescribed for Executive Posts
Assistant Geologist in Agricultural Department	Standard – III or Better	Form prescribed for Other than Executive and Ministerial Posts
Geologist in Highways Department	Standard – II or Better Vision – Colour Blindness will be a disqualification	Form prescribed for Executive Posts

The candidate with defective vision should produce eye fitness certificate from qualified eye specialist

#### 6. **GENERAL INFORMATION**:-

- A. The rule of reservation of appointment is applicable to each department separately. The distribution of vacancies will be as per rule in force.
- B. In G.O.Ms.No.145, Personnel and Administrative Reforms(S) Department dated 30.09.2010 and G.O.Ms.No.40, Personnel and Administrative Reforms(S) Department dated 30.04.2014 the Government have issued orders to fill up 20% of vacancies in direct recruitment on preferential basis to Persons who studied the prescribed qualification in Tamil Medium. The 20% reservation of vacancies on preferential allotment to **Persons Studied in Tamil Medium (PSTM)** will apply for this recruitment. Applicants claiming PSTM preference must produce certificate issued by Head of Institution as proof as per the specimen contained in the "Instructions to Applicants" for having studied the prescribed qualification in Tamil Medium. (Having written the examination in Tamil language alone will not qualify for claiming this preference). If the Applicants with PSTM certificate are not available for selection for appointment against reserved turn such turn shall be filled up by other eligible Applicants but belonging to the respective communal category. The PSTM certificate, in prescribed format / proforma available in the Commission's website at 'www.tnpsc.gov.in' shall be obtained from the Head of the Institution and shall be produced / uploaded when called for.(For further details refer Instructions to Applicants)
- C. The number of vacancies advertised is only approximate and is liable to modification with reference to vacancy position at any time including reduction before finalization of selection.

- D. If no qualified and suitable women applicants are available for selection against the vacancies reserved for them, those vacancies will be filled by male applicants belonging to the respective communal categories.
- E. The selection for appointment to the above said post is purely provisional subject to final Orders on pending Writ Petitions, if any, filed at Madras High Court and Madurai Bench of Madras High Court.
- F. Reservation of appointment to Destitute Widows and Ex-Serviceman will not apply to this recruitment
- G. 3% reservation for Differently Abled Persons will be made applicable to Differently Abled Persons for those posts identified as suitable in G.O.MS.No.13, Welfare of Differently Abled Persons (DAP.3.2) Department, dated 02.03.2016 and as per the amendments issued from time to time. The following posts only have been identified as suitable for following categories of Differently Abled Persons only:-

Name of the Posts	Disabled Categories Identified as suitable	Functional classification
Assistant Geologist in Geology and Mining Department		
Assistant Geologist in Agricultural Department	HH/OA/OL	HH - Hard of Hearing (55% to 80%) OA-One Arm (40% to 70%) OL-One Leg (40% to 70%)
Geologist in Highways Department		0_ 00 _0g (, 0 ,

If no suitable Differently Abled Persons belonging to a particular Differently Abled Category is available for selection against the vacancies reserved for them, it will be filled up as per rule in force. Differently abled persons can apply and should upload the documents referred to in para. 14 (b) of the Commission's 'Instructions to the Applicants' when called for.

- H. The Differently Abled persons should upload a copy of certificate of physical fitness (refer para 14(b) of 'instructions to Applicants') specifying the nature of physical handicap and the degree of disability based on the norms laid down, from the Medical Board to the effect that his/her handicap will not render him/her incapable of efficiently discharging the duties attached to the post to which he/she has been selected when called for by the Tamil Nadu Public Service Commission.
- I. Even after filling up of the vacancies reserved for SC Arunthathiyars on preferential basis, if more number of qualified Arunthathiyars are available, they shall be entitled to compete with the Scheduled Castes other than Arunthathiyars in the inter-se merit among them and if any post reserved for Arunthathiyars remain unfilled for want of adequate number of qualified Applicants, it shall be filled up by Scheduled Castes other than Arunthathiyars.
- J. Evidence for claims made in the online application should be uploaded / submitted in time when called for the documents. Any subsequent claim made thereafter on submission of online application will not be entertained. Failure to submit the documents within the stipulated time limit will entail reservation of the Application.
- K. Correct and True information regarding arrest, convictions / debarment / disqualification by any recruiting agency, criminal or any disciplinary proceedings initiated / pending or finalized, participation in agitation or any Political Organization, candidature in election for Parliament/State Legislature/Local Bodies etc., if any, should also be furnished to the Commission at the time of application i.e., the details thereof, originals of the Judgement, order / or G.O dropping further action in Departmental proceedings or any document that may prove the suitability of such Applicants for a Government appointment in such cases must be produced at the stage / time of Certificate Verification without fail.

- L. Incomplete applications and applications containing wrong claims or incorrect particulars relating to category of reservation / other basic qualification / eligibility wise / age / communal categories / educational qualification / physical qualification and other basic eligibility criteria will be liable for rejection.
- M. Tamil Nadu Public Service Commission will not be responsible for any consequences arising out of furnishing of incorrect and incomplete details in the application or omission to provide the required details in the application forms.

### N. Knowledge of Tamil:-

Applicants should possess adequate knowledge of Tamil on the date of this Notification. (for details refer para.11 of the 'Instructions to Applicants')

## 7. <u>SCHEME OF EXAMINATION (OBJECTIVE TYPE & OMR METHOD) AND ORAL</u> TEST:-

(A) FOR THE POSTS FOR WHICH P.G. QUALIFICATION IS PRESCRIBED.

(For the post of Assistant Geologist in Geology and Mining Department, Public Works Department and Geologist in Highways Department)

	Duration	Maximum	Minimum Qualifying Marks for Selection		
Subject	Duration	Marks	SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs.	Others	
PAPER I (200 Questions) Geology (PG standard) (code No.240)	3 Hours	300			
PAPER II (100 Questions) General Studies (Degree Standard) Interview and Record	2 Hours	200	171	228	
Interview and Necold	Total	570			

(B) FOR THE POSTS FOR WHICH DEGREE QUALIFICATION IS PRESCRIBED.

(For the post of Assistant Geologist in Agricultural Engineering Department)

	Duration	Maximum	Minimum Qualifying Marks for Selection			
Subject	Duration	Marks	SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs.	Others		
PAPER I (200 Questions) Geology (Degree standard) (code No.239)	3 Hours	300				
PAPER II (100 Questions) General Studies (Degree Standard) Interview and Record	2 Hours	200	<del>-</del> 171	228		
	Total	570				

### Note:-

- i. The Question Paper in Paper-I will be set in English only.
- ii. The Question paper in Paper II will be set in both English and Tamil
- iii. Refer para 22 of "Instructions to Applicants" in regard to instructions to be followed while appearing for competitive examinations conducted by the Commission
- iv. The Syllabus for Examination is furnished in the Annexure II of the notification.

### 8. PROCEDURE OF SELECTION:-

The selection will be made in two stages, viz. (i) Written Examination and (ii) an Oral Test in the form of an Interview.

(For further details refer paragraph 23(b) of the 'Instructions to Applicants').

### 9. CENTRE FOR EXAMINATION:-

Examination will be held at the following centres (5):-

Chennai, Madurai, Coimbatore, Trichy and Tirunelveli.

#### Note:-

- (i) For Written Examination, the Commission reserves the right to increase / decrease the number of Examination Centre and to re-allot the applicants as decided by Commission.
- (ii) Applicants will be required to appear for the Written Examination / Oral Test / Certificate verification at their own expenses.

### 10. MODE OF PAYMENT OF EXAMINATION FEE:-

- Examination fee Rs.100/- (Rupees One hundred only) is payable by online through Net Banking/credit card/Debit card or it can be paid by offline at SBI / at Indian Bank within 2 days from the date of submission of online application.
- Applicants have to register their basic particulars through One -Time Registration which is mandatory on payment of Rs.50/- towards registration fee. The registration shall be valid for a period of five years from the date of One-Time Registration.
- Applicants have also to pay the service charges applicable to the State Bank of India / Indian Bank
- Applicants can avail exemption from paying examination fees as per eligibility criteria.
- Offline mode of payment in the form of Demand Draft / Postal Order etc., will not be accepted and the applications forwarded with such modes of payment will be summarily rejected.
- Those who have registered in the **One -Time Registration** system, and paid the registration fee of Rs.50/- and received the registration ID **need not pay** the Registration fee i.e., Rs.50/- and it is enough to pay the examination fee alone.
- Applicants who have made One-Time Registration must apply for the notified posts. One –
   Time Registration is only to avail exemption for Registration fee for a period of 5 years from the date of registration.

(For further details regarding the Examination fee concessions refer para 12 of the 'Instructions to Applicants')

#### 11. NO OBJECTION CERTIFICATE AND INFORMATION TO THE EMPLOYER:

No Objection Certificate obtained from appropriate authority shall be produced at the time of Certificate Verification. Failure to produce at that time the application will be rejected.

For details refer para 15(g) of Commission's 'Instructions to Applicants'. - Any violation of this instruction will be liable for / end in rejection of application and forfeit his/her candidature

### 12. CONCESSIONS:-

- (i) Concessions in the matter of age and/or fees allowed to SC, SC(A), ST, MBC/DC, BC, BCM, Destitute Widows, Differently Abled Persons, Ex-servicemen, other categories of persons etc., are given in para 12 to 14 of the 'Instructions to Applicants'.
- (ii) Persons claiming concession referred to above has to produce evidence for such claim when called for, otherwise his/her application will be liable for rejection.

#### Note

In all cases, an Ex-Serviceman once recruited to a post in any class or service or category, cannot claim the concession of being called an Ex-Serviceman for his further recruitment (Proviso to section 3(j)(vii) of Tamil Nadu Government servants(conditions of service) Act,2016)

### 13. HOW TO APPLY:-

- 1. Applicants should apply only through online mode in the Commission's Websites www.tnpsc.gov.in/www.tnpscexams.net/ www.tnpscexams.in
- 2. One Time Registration (OTR) and applicant Dashboard are mandatory before applying for any post. One Time Registration is valid for 5 years from the date of registration.
- 3. For applying in One Time Registration, the applicants should have scanned image of their photograph and signature in CD/DVD/Pen drive to upload the photo and signature.
- 4. Applicants who have already registered in One Time Registration on or before 29.09.2015 shall use their existing user ID and Password to create applicant Dashboard in the **new** One Time Registration system. No applicant is permitted to create more than one registration ID in one time registration.
- 5. Enter the Unique ID and password to view the already available information and update them.
- 6. One Time Registration is not an application for any post. It is just collection of information from the applicants and giving a separate dashboard to each applicant to facilitate them to maintain their own profile. Applicant who wishes to apply for any post shall click "Apply" against the post Notified in the Commission's Website and use the same USER ID and PASSWORD given for ONE TIME REGISTRATION.
- 7. Select the name of the post or service for which you wish to apply.
- 8. Applicants are required to upload their photograph and signature as per the specifications given in the Guidelines for Scanning and Upload of Photograph and Signature.
- 9. An Online application uploaded without the photograph and signature will be rejected.
- 10. All the particulars mentioned in the online application including name of the Applicants, Post applied educational qualifications Communal Category, Date of Birth, Address, Email ID, Centre of Examination etc. will be considered as final and no Modifications will be allowed after the last date specified for applying online. Since certain fields are firm and fixed and cannot be edited, Applicants are requested to fill in the online application

form with the utmost care and caution as no correspondence regarding change of details will be entertained.

### 11. Print Option:-

- After submitting the application, Applicants can print / save their application in PDF format.
- ii. On entering registration number and password, Applicants can download their application and print, if required.
- iii. Need not send the printout of the online application or any other supporting documents to the Commission. The certificates will be verified only when the Applicants come up for next stage of selection.
- 12. One time registration will not be considered as an application for any post.

### 14. OTHER IMPORTANT INSTRUCTIONS:-

- a. Applicants should ensure their eligibility for examination: The Applicants applying for the examination should go through all instructions carefully and ensure that they fulfil all eligibility conditions for admission to examination. Their admission to all stages of the examination will be purely provisional subject to satisfying of the eligibility conditions. Mere issue of memo of admission to the Applicant will not imply that his/her candidature has been fully cleared by the Commission.
- b. The Hall Tickets for eligible Applicants will be made available in the Commission's Website www.tnpsc.gov.in or www.tnpscexams.net or www.tnpscexams.in for downloading by Applicants. No Hall Tickets will be sent by post. So the applicants should watch TNPSC website before the scheduled date of examination. The applicants must comply with each and every instruction given in the Hall Ticket.
- c. Grievance Redressal Cell for guidance of Applicants:- In case of any guidance /information / clarification of their applications, candidature, etc., Applicants can contact Tamil Nadu Public Service Commission's Office in person or over Telephone No.044-25332833 / 25332855 or the Commission's Office Toll-Free No. 1800 425 1002 on all working days between 10.00 a.m. and 05.45 p.m.

#### d. Mobile Phones and other Articles Banned:

- i. Applicants are not allowed to bring Pager, Cellular Phone, Watches and Ring with inbuilt, Memory Notes etc., or any other Electronic device and Non electronic devices such as P&G Design Data Book, Books, Notes, Hand Bags to the examination hall / room on the date of examination.
- ii. If they are found to be in possession of any such thing or instrument they will not be allowed to write the examination further, besides invalidation of answer paper and / or debarment. If it is considered necessary they will be subjected to thorough physical search including frisking on the spot. (For further details refer "Instructions to Applicants")
- iii. Do not bring into the Examination Hall any article such as books, notes, loose sheets, electronic or any other type of calculators, mathematical and drawing instruments, Log

- Tables, stencils of maps, slide rules, Text Books, rough sheets etc., <u>except the permitted</u> writing material (i.e. pen).
- iv. Applicants are advised in their own interest not to bring any of the banned items including Mobile Phones / Pagers to the venue of the examination, as arrangements for safekeeping cannot be assured.
- e. Applicants are not required to submit along with their application any certificates in support of their claims regarding age, educational qualifications, physical qualification, community certificates and certificates regarding their physical disability etc., which should be submitted when called for by the Tamil Nadu Public Service Commission. The Applicants applying for the examination should ensure that they fulfil all the eligibility conditions for admission to the Examination. Their admission at all the stages of examination for which they are admitted by the Commission viz. Written Examination and Oral Test will be purely provisional, subject to their satisfying the prescribed eligibility conditions. If on verification at any time before or after Written Examination, Certificate Verification and Oral Test, it is found that they do not fulfil any of the eligibility conditions, their candidature for the recruitment will be liable for rejection / cancellation by the Commission.(For further details refer "Instructions to Applicants")
- **f.** If any of their claim is found to be incorrect, it will lead to rejection / debarment.
- g. Unfair means strictly prohibited: No Applicant shall copy from the papers of any other Applicant or permit his papers to be copied or give or attempt to give or obtain or attempt to obtain irregular assistance of any description. (For further details refer "Instructions to Applicants")
- h. Conduct in Examination Hall: No Applicant should misbehave in any manner or create a disorderly scene in the Examination Hall or harass the staff employed by the Commission for the conduct of the examination. Any such misconduct will be severely viewed and penalised. (For further details refer "Instructions to Applicants")
- i. For violation of Instructions to Applicants in any manner suitable penalty will be imposed as per the Instructions to Applicants or as deemed fit by the Commission.

# The Online Application can be submitted upto 21.03.2017 till 11.59 p.m., after which the link will be disabled

(For detailed information applicants may refer Commission's 'Instructions to Applicants' at the Commission's website <a href="www.tnpsc.gov.in">www.tnpsc.gov.in</a>)

### **DISCLAIMER**

"The Government orders relating to equivalence of qualification have been hosted in the Tamil Nadu Public Service Commission website. However, the Applicants while applying for the examination should furnish the details of orders on equivalence and produce evidence for equivalence of qualification in the form of Government order, if any, which are not mentioned in the Annexure to the Notification when called for by Tamil Nadu Public Service Commission".

Secretary

### Annexure – I

# Assistant Geologist in Agriculture Engineering Department, Assistant Geologist in Geology and Mining Department, Assistant Geologist in Public Works Department and Geologist in Highways Department

Degree considered as Equivalent to the Qualification prescribed in the Rule	G.O. in which ordered
B. Sc, Applied Geology awarded by Periyar University is equivalent to B. Sc., Geology	G.O.(Ms).No.72, Higher Education (K2) Department, dated 20.04.2015.
M. Sc., Applied Geology and Geomatics awarded by Gandhigram Rural Institute (Deemed University) is equivalent to M. Sc., Geology.	G.O.(Ms).No.212, Higher Education (K2) Department, dated 17.12.2014.
M.Sc., Applied Geology awarded by Periyar University is equivalent to M.Sc., Geology.	G.O.(Ms).No.232, Higher Education (K2) Department, dated 18.11.2016.
5 Years Integrated Courses offered by Annamalai University (Applied Geology) is equivalent to the corresponding UG Degree.  M.Sc., (Applied Geology) awarded by Pondicherry University be equivalent to the qualification prescribed for the	G.O.(Ms).No.75, Personnel And Administrative Reforms (M) Department dated 30.06.2011. G.O.(Ms).No.27, Industries (E1) Department, dated 02.03.2005.
post of Assistant Geologist.  M.Sc., (Applied Geology) awarded by any University recognized by the UGC as equivalent to M. Sc., (Geology)	(E1) Department, dated



### **ABSTRACT**

Public Services – Equivalence of Degree – Various educational qualifications possessed by the candidates as equivalent to the courses offered by the various Universities – Recommendation of Equivalence Committee – Orders – issued.

### HIGHER EDUCATION (K2) DEPARTMENT

G.O. (Ms) No.72

Dated: 20.04.2015 மன்மத், சித்திரை 7, திருவள்ளுவர் ஆண்டு 2046.

### Read:-

- 1. G.O.(Ms) No.441, Personnel and Administrative Reforms (R) Department, dated 20.12.1993.
- 2. D.O. letter from the Secretary, Tamilnadu Public Service Commission, No.515/RND-F1/2015, dated 26.03.2015.

### ORDER:-

In the letter second read above, the Secretary, Tamil Nadu Public Service Commission has forwarded the resolutions passed by the 51<sup>st</sup> Equivalence Committee meeting held on 25.03.2015 for the purpose of employment in Public Services.

2. The Government after careful consideration have decided to accept the following recommendation of the 51<sup>st</sup> Equivalence Committee held on 25.03.2015 and to direct that the following educational qualifications possessed by the candidates as equivalent to the courses mentioned therein from the date of issuance of such degree:-

SI. No.	Subjects	Equivalent / Not Equivalent
1	Public Services – Educational Qualification – Consideration of B.Sc. Mathematics with Computer Applications of Bharathiar University as to whether equivalent to B.Sc. Mathematics.	Equivalent
2	Public Services – Educational Qualification – Consideration of B.Sc. Applied Geology awarded by Periyar University as to whether equivalent to B.Sc. Geology.	Equivalent

.2.

	SI. No.	Subjects	Equivalent / Not Equivalent
	3	Public Services – Educational Qualification – Consideration of B.Sc. Plant Biology and Plant Biotechnology awarded by St. Xavier's College (Autonomous), Palayamkottai affiliated to Manonmaniam Sundaranar University as to whether equivalent to B.Sc. Botany.	
	4	Public Services – Educational Qualification – Consideration of B.Com. (Finance Investment) awarded by Annamalai University as to whether equivalent to B.Com.	Equivalent-
	5	Public Services – Educational Qualification – Consideration of M.Com. with Computer Application awarded by Alagappa University as to whether equivalent to M.Com.	Equivalent
	6	Public Services – Educational Qualification – Consideration of B.A. degree in Economics –	
**	described the Market has	Elementary Statistics for Economics awarded by University of Madras as to whether equivalent to B.A. Economics with Statistics as ancillary-subject.	Equivalent
	7	Public Services – Educational Qualification – Consideration of B.Sc. Zoology (Vocational) awarded by Mother Teresa Women's University as to whether equivalent to B.Sc. Zoology.	Equivalent
	8	Public Services – Educational Qualification – Consideration of B.Sc. Nutrition Food Service Management and Dietetics awarded by University of Madras as to whether equivalent to B.Sc. Home Science.	Equivalent
		Public Services – Educational Qualification – Consideration of M.Com. (Finance) awarded by Madurai Kamaraj University as to whether equivalent to M.Com.	Equivalent
		Public Services – Educational Qualification – Consideration of B.Sc. Advanced Zoology and Biotechnology (Sericulture) awarded by Manonmaniam Sundaranar University as to whether equivalent to B.Sc. Zoology.	Equivalent

SI. No.	Subjects	Equivalent / Not Equivalent
11	Public Services – Educational Qualification – Consideration of 5 years Integrated course in M.Sc. Computer Science and Technology offered by Pachaiyappa's College for Men affiliated to University of Madras as to whether equivalent to corresponding U.G. as well as P.G.	Five years Integrated Course (Full time) shall be Deemed to have completed 3 years UG Degree and 2 years PG Degree in that subject.
12	Public Services – Educational Qualification – Consideration of M.Sc. Applied Botany awarded by Periyar University as to whether equivalent to M.Sc. Botany.	Equivalent

(By order of the Governor)

Apoorva Secretary to Government

To

The Secretary, Tamil Nadu Public Service Commission, Chennai-3.

The Registrar of all Universities Under the aegis of Higher Education Department The Vice-Chairman, Tamil Nadu State Council for Higher Education, Chennai-5 Copy to:-

The Senior Personal Assistant to Minister (Higher Education), Chennai-9.

The Private Secretary to the Secretary to Government, Higher Education Department, Chennai-9.

The Private Secretary to the Principal Secretary to Government, School Education Department, Chennai-9.

The Private Secretary to the Principal Secretary to Government, Personnel and Administrative Reforms Department, Chennai-9. Stock file / Spare copy.

//Forwarded / By Order//

Section Officer rely wis

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**ABSTRACT** 

Public Services Equivalence of Degree – Various educational qualifications possessed by the candidates as equivalent to the courses offered by the various Universities – Recommendation of Equivalence Committee – Orders – issued.

### HIGHER EDUCATION (K2) DEPARTMENT

G.O. (Ms) No. 212

Dated: 17.12.2014 ஜய , மார்கழி 2 திருவள்ளுவர் ஆண்டு 2045

### Read:-

Np 1. G.O.(Ms).No.441, Personnel and Administrative Reforms (R) Department, dated 20.12.1993.

P23-25 c 2. D.O. Letter from the Secretary, Tamil Nadu Public Service Commission No.8000/RND-F1/2014, dated 05.12.2014.

### ORDER:-

In the letter second read above, the Secretary, Tamil Nadu Public Service Commission has forwarded the resolutions passed by the 50<sup>th</sup> Equivalence Committee meeting held on 03.12.2014 for the purpose of employment in Public Services.

2. The Government after careful consideration have decided to accept the following recommendation of the 50<sup>th</sup> Equivalence Committee held on 03.12.2014 and direct that the following educational qualifications possessed by the candidates as equivalent to the courses mentioned therein from the date of issuance of such degree:-

SI. No.	Subjects	Equivalent / Not Equivalent
1	Public Services – Educational Qualification – Consideration of M.Sc. Applied Mathematics (Operation Research) awarded by Bharathidasan University as to whether equivalent to M.Sc., Mathematics.	Equivalent

SI. No.	Subjects	Equivalent / Not Equivalent
2	Public Services – Educational Qualification – Consideration of M.Sc., Mathematics (Applicable Mathematics) awarded by Periyar University as to whether equivalent to M.Sc., Mathematics.	Equivalent
3	Public Services – Educational Qualification – Consideration of B.Sc., (Special) Mathematics offered by Lady Doak College, Madural Kamaraj University as to whether equivalent to B.Sc., Mathematics.	Equivalent
4	Public Services – Educational Qualification – Consideration of M.Sc., Applied Geology and Geomatics awarded by Gandhigram Rural Institute (Deemed University) as to whether equivalent to M.Sc. Geology.	Equivalent

### (BY ORDER OF THE GOVERNOR)

### HEMANT KUMAR SINHA ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

To:

√ The Secretary, Tamil Nadu Public Service Commission, Chennai-3.

The Registrar of all Universities under the aegis of Higher Education Department.

The Vice-Chairman, Tamil Nadu State Council for Higher Education, Chennai-5 Copy to:-

The Senior P.A. to Minister (Higher Education), Chennai-9.

The P.S. to Additional Chief Secretary to Government,

Higher Education Department, Chennai-9.

The P.S. to Principal Secretary to Government, School Education Department, Chennai-9.

The P.S. to Principal Secretary to Government,

Personnel and Administrative Reforms Department, Chennai-9.

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//Forwarded / By Order//

Section Officer 19/12/19

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057280 ABSTRACT

Public Services – Equivalence of Degrees – Equivalence of courses offered by the various Universities to the similar courses – Resolutions of Equivalence Committee of Tamil Nadu Public Service Commission – Orders – Issued.

### HIGHER EDUCATION (K2) DEPARTMENT

G.O. (Ms) No.232

Dated:18 .11.2016 துன்முகி வருடம், கார்த்திகை 03,

திருவள்ளுவர் ஆண்டு 2047.

### Read:-

1. APG.O. (Ms.) No.441, Personnel and Administrative Reforms (R) Department, dated 20.12.1993.

2. From the Secretary, Tamil Nadu Public Service Commission, D.O. Letter No.3020/RND-F1/2016, dated 09.09.2016.

### ORDER:-

In the letter second read above, the Secretary, Tamil Nadu Public Service Commission has forwarded the resolutions passed in the 54<sup>th</sup> Equivalence Committee meeting held on 08.09.2016 on the equivalence of courses offered by various Universities to the similar courses for the purpose of employment in Public Services and requested the Government to issue orders in the matter.

2. The Government, after careful consideration, have decided to approve the following resolutions passed in the 54<sup>th</sup> Equivalence Committee Meeting held on 08.09.2016 and direct that the following courses offered by various Universities be equivalent to the similar courses mentioned therein from the date of issuance of such degrees:-

Agenda subjects	Resolution of the Committee
Agenda No. 1 Public Services – Educational Qualification – Consideration of the subject B.Sc. Nutrition and Dietetics awarded by Manonmaniam Sundaranar University as to whether equivalent to B.Sc. Food Science and Nutrition for the purpose of employment in Public Services.	Equivalent ·
Agenda No. 2  Public Services – Equivalence of Qualification – Consideration of  (i) B.Sc. Nutrition and Dietetics, awarded by Periyar University as to equivalent to B.Sc., Home Science for the purpose of employment in Public Services.  (ii) M.Sc. Food Science and Nutrition Degree awarded by Periyar University as to whether equivalent to M.Sc. Home Science for the purpose of employment in Public Services	Equivalent

Agenda No.5 Public Services — Educational Qualification — Consideration of B.Sc. Zoology (Vocational stream Sericulture) awarded by Periyar University as to whether equivalent to B.Sc. Zoology for the purpose of employment in Public Services.	Equivalent
Agenda No. 7 Public Services – Educational Qualification – Consideration of B.A. Corporate Secretaryship awarded by University of Madras as to whether equivalent to B.Com. for the purpose of employment in Public Services.	Equivalent
Agenda No.11  Public Services – Educational Qualification – Consideration of B.Sc., (Mathematics, Statistics and Computer Science) (Chosen subjects) in Part-II of the Degree awarded by Sri Venkateswara University, Tirupathi (Andhra Pradesh) as to whether equivalent to B.Sc. degree in Statistics for the purpose of employment in Public Services.	Equivalent
Agenda No.12 Public Services – Educational Qualification – Consideration of B.B.A. Retail Management awarded by Bharathidasan University as to whether equivalent to B.B.A. for the purpose of employment in Public Services.	Equivalent
Agenda No. 13 Public Services – Educational Qualification – Consideration of B.A. Sociology with Computer Application awarded by Fatima College (Autonomous) affiliated to Madurai Kamaraj University as to whether equivalent to B.A. Sociology for the purpose of employment in Public Services.	Equivalent
Agenda No. 14  Public Services – Educational Qualification – Consideration of M.Sc. Instrumentation from 2002-2003 to 2007-2008 and renamed thereafter as M.Sc. Electronics & Instrumentation semester degree courses awarded by Madurai Kamaraj University as to whether equivalent to M.Sc. Electronics OR M.Sc. Electronics and Communication semester degree course for the purpose of employment in Public Services.	M.Sc. Instrumentation and M.Sc. Electronics and Instrumentation is equivalent to both M.Sc. Electronics and M.Sc. Electronics and Communication

Agenda No.17  Public Services – Educational Qualification – Consideration of M.Sc. (Software Engineering) (Integrated) awarded by Periyar University as to whether equivalent to B.Sc. and M.Sc. (Software Engineering) for the purpose of employment in Public Services.	Equivalent
Agenda No. 19 Public Services – Educational Qualification – Consideration of B.Sc. (Special) Chemistry with Cheminformatics awarded by Lady Doak College affiliated to Madurai Kamaraj University as to whether equivalent to B.Sc. Chemistry for the purpose of employment in Public Services.	Equivalent.
Agenda No.21  Public Services — Educational Qualification — Consideration of Two years integrated M.P.Ed. Programme awarded by Alagappa University College of Physical Education as to whether equivalent to one year B.P.Ed. and one year M.P.Ed. for the purpose of employment in Public Services.	Equivalent
Agenda No. 22 Public Services – Educational Qualification – Consideration of M.Sc. Applied Geology awarded by Periyar University as to whether equivalent to M.Sc. Geology for the purpose of employment in Public Services.	

(BY ORDER OF THE GOVERNOR)

### A.KARTHIK SECRETARY TO GOVERNMENT (FAC)

To The Secretary, Tamil Nadu Service Commission, Chennai-3.

The Registrar of all Universities Under the aegis of Higher Education Department The Vice-Chairman, Tamil Nadu State Council for Higher Education, Chennai-5 Copy to:-

The Senior P.A. to Minister (Higher Education), Chennai-9.

The P.S. to Secretary to Government, Higher Education Department, Chennai-9.

The P.S. to Principal Secretary to Government,

School Education Department, Chennai-9.

The P.S. to Principal Secretary to Government,

Personnel and Administrative Reforms Department, Chennai-9. Sf/Sc.

//Forwarded by order//





<u>ABSTRACT</u>

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Public Services - Equivalence Committee - Recognition of the certain integrated purses offered by Annamalai University as equivalent to corresponding U.G. degree for purpose of employment in Public Services - Recommendation of the Equivalence committee - Orders - Issued.

### PERSONNEL AND ADMINISTRATIVE REFORMS (M) DEPARTMENT

G.O. (Ms.) No. 75

Dated: 30.06.2011

ஆனி 15,

திருவள்ளுவர் ஆண்டு 2042

Read:

- 1. From the Registrar, Annamalai University letter No. B1/2010, dated 03.03.2010.
- 2. From the Secretary, Tamil Nadu Public Service Commission D.O. letter No. 7564/RND-F1/10, dated 09.02.2011.

RDER:-

In the letter first read above, the Registrar, Annamalai University has requested consider the (Twenty Four) five year integrated P.G. degree courses offered by the bove University as equivalent to the corresponding U.G. degree for the purpose of imployment in Public Services. The above request of the Registrar, Annamalai inversity have been referred to the Committee constituted in G.O.(Ms.)No. 441, ersonnel and Administrative Reforms (R) Department, dated 20.12.93.

2. In the letter second read above, the Secretary, Tamil Nadu Public Service ommission has informed that the Equivalence Committee, in its meeting held on 5.01.2011 has passed the following Resolution.

#### Resolution No. 6

Consideration of the following 5 year : integrated Courses offered by Annamalai University as equivalent to corresponding U.G. degree for the purpose of employment in Public Services.

### Recommendation

To recommend to Government to consider the candidates to be eligible for the posts where degree is prescribed.

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- 1. M.A., (English & Communication)
- 2. M.A., (History)
- 3. M.A., (Political Science)
- 4. M.A., (Applied Economics)
- 5. M.A., (Applied Sociology)
- 6. M.A., (Population & Development)
- 7. M.A., (Philosophy, Culture & Tourism)
- 8. M.L.I.S., /
- 9. M.A., (Rural Development)
- 10. M.Com.,
- 11.M.Sc., (Mathematics)
- 12.M.Sc., (Statistics with Computer Application)
- 13. M.Sc., (Physics)
- 14. M.Sc., (Chemistry)
- 15. M.Sc., (Plant Biology & Plant Biotechnology)
- 16. M.Sc., (Herbal Science)
- 17.M.Sc., (Zoology) /
- 18. M.Sc., (Bio-Informatics)
- 19. M.Sc., (Microbiology)
- 20.M.Sc., (Ocean Science & Technology)
- 21.M.Sc., (Applied Geology)
- 22. M.Sc., (Biotechnology)
- 23. M.A., (Tamil)
- 24. M.Sc., (Clinical Psychology)
- 3. The Government after careful consideration, have decided to accept the recommendation of the Equivalence Committee and accordingly, direct that five year integrated courses offered by Annamalai University mentioned in para 2 above be recognized as equivalent to corresponding U.G. degree for considering the candidates to be eligible for the posts where degree is prescribed.

4. Necessary amendments will be issued to the General Rule 13 of the Tamil Nadu State and Subordinate Services separately.

(BY ORDER OF THE GOVERNOR)

### M. KUTRALINGAM PRINCIPAL SECRETARY TO GOVERNMENT

The Secretary, Tamil Nadu Public Service Commission, Chennai-6. The Registrar, Annamalai University, Annamalai Nagar - 608 002. All Secretaries to Government, Chennai – 9. Ali Departments in Secretariat, Chennai – 9. The Personnel and Administrative Reforms (S) Department, Chennai – 9.

Copy to:

The Special Personal Assistant to Hon'ble Minister (Law, Courts & Prisons), Chennai-9. The Special Personal Assistant to Hon'ble Minister (Higher Education), Chennai – 9. he Private Secretary to the Principal Secretary to Government, Personnel and Administrative Reforms Department, Chennai-9. All Sections in Personnel and Administrative Reforms Department, Chennai – 9. he Personnel and Administrative Reforms (AR-II) Department, Chennai – 9. Stock File / Spare Copy.

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### GOVERNMENT OF TAMIL NADU

### ABSTRACT

Public Services – Educational Qualifications – M.Sc. (Applied Geology) awarded by Pondicherry University as equivalent qualification for direct recruitment to the post of Assistant Geologist in the Tamil Nadu Geology and Mining Subordinate Service – Orders – Issued.

### INDUSTRIES (E.1) DEPARTMENT

G.O.(Ms) No. 27

Dated: 2. 3.2005

1. From the Secretary, TNPSC., Chennai-2, Lr.No.4586/விய அது /ஊ 1/2000, dated

 From the Commissioner of Geology and Mining, Lr.No.Rc.7016/PM2, dt.24.6.04.

### ORDER:

To

In his letter read above, the Secretary, Tamil Nadu Public Service Commission has informed that in the Committee Meeting held on 8.11.2001 it has been decided to recognize the M.Sc., (Applied Geology) offered by the Pondicherry University as equivalent to the qualifications prescribed for the post of Assistant Geologist under direct recruitment in the Tamil Nadu Geology and Mining Subordinate Service and sent a copy of the Committee's recommendation to the Government for passing necessary orders on the same

.2. The Government after careful consideration of the above recommendation of the Tamil Nadu Public Service Commission, direct that the degree of M.Sc., (Applied Geology) awarded by the Pondicherry University be equivalent to the qualifications prescribed for the post of Assistant Geologist under direct recruitment in the Tamil Nadu Geology and Mining Subordinate Service.

3. Necessary amendments to the Special rules for the Geology and Mining subordinate service will be issued separately.

(By order of the Governor)

RAMESHRAM MISHRA SECRETARY TO GOVERNMENT

The Director of Geology and Mining, Chennal-32.

The Secretary, Tamil Nadu Public Service Commission, Chennai-2.

The personnel and Administrative Reforms(R) Department, Chennai-9
All Secretaries to Government in Secretariat.
All District Collectors

All Heads of Department.

/Forwarded By Order/

SECTION OFFICER

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**ABSTRACT** 

Industries\* Recommendation of Equivalence Committee - M.Sc., (Applied Geology) awarded by any University recognized by the UGC as equivalent to M.Sc., (Geology) - Orders - Issued.

### Industries (E.1) Department

G.O. (Ms.) No.156

Dated: 28.12.2016 துன்முகி – மார்கழி -13 திருவள்ளுவர் ஆண்டு 2047

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From the Secretary, Tamil Nadu Public Service Commission D.O.letter No.4586/RND-F1/2000, dated 16.09.2014 and letter even number dated 22.03.2016.

ORDER:

In the letter read above, the Secretary, Tamil Nadu Public Service Commission has stated that the Equivalence Committee in its 24<sup>th</sup> meeting held on 17.12.2007 inter-alia had passed the following resolution:-

Resolution No.6	Resolution.
Consideration of M.Sc., (Applied Geology) awarded	Recommended.
by any University recognized by the UGC as	
equivalent to M.Sc., (Geology).	

The Secretary, Tamil Nadu Public Service Commission has therefore requested the Government (in Industries Department) to issue Government Order on the subject M.Sc., (Applied Geology) awarded by any University recognized by the UGC as equivalent to M.Sc., (Geology) as per the Equivalence Committee.

2. The Government, after careful consideration, decided to accept the above request of the Secretary, Tamil Nadu Public Service

Commission and accordingly order that M.Sc., (Applied Geology) awarded by any University recognized by the University Grants Commission is equivalent to M.Sc., (Geology)

### (By order of the Governor)

### VIKRAM KAPUR PRINCIPAL SECRETARY TO GOVERNMENT

To The Principal Secretary to Government, Public Works Department Chennai-600 009. The Secretary to Government, Higher Education Department, Chennai - 600 009. The Secretary to Government, Agriculture Department, Chennai - 600 009. The Principal Secertary to Government, Municipal Administration and Water Supply Department, Chennai - 600 009. The Secretary to Government, Personnel and Administrative Reforms Department, Chennai - 600 009. The Secretary to Government, Tamil Nadu Public Service Commission Chennai 600 003. The Commissioner of Geology and Mining, Guindy, Chennai-600 032.

The Director of Collegiate Education,

Chennai -600 006.

(for forwarding the same to all Universities in Tamil Nadu)

The Chief Engineer,

Public Works Department,

Chennai-600 005.

The Chief Engineer,

State Ground and Surface Water Resources Data Centre,

Chennai - 600 113.

The Director, Agriculture Department, Chennai - 600 005.

The Director, Municipal Administration and Water Supply Department, Chennai - 600 005.

Copy to:

The Industries (OP.II) Department, Chennai-600 009. SF/Sc.

// Forwarded /By Order //

(D.BALAMURUGAN) SECTION OFFICER

### GEOLOGY (U.G DEGREE STANDARD)

Code No.239

<u>(i)</u>

### **UNIT I - GENERAL GEOLOGY**

Origin, Interior and Age of the Earth - Weathering - Types and products - Geological work of Wind, River, Sea and Groundwater - Volcanoes - Earthquakes - causes and effects - Seismic zonation - Richter Scale - Principles of Plate Tectonics — fundamental and geomorphology.

### **UNIT II – STRATIGRAPHY**

Principles of Stratigraphy - Correlation - Geological Time Scale - General characteristics, descriptive and economic importance of Archean, Cuddapah, Vindhyan and Gondwana systems of Peninsular India -Cretaceous system of Tamil Nadu.

### <u>UNIT III - STRUCTURAL GEOLOGY</u>

Folds - Faults - Joints - Unconformities - Recognition of overturned beds – Stress and strain relationship – Attitude of beds – Measurement of dip, apparent dip, strike using Cino and Brunton Compass .

### **UNIT IV - PALAEONTOLOGY**

Fossils – Definitions, Conditions, mode of preservation, uses of Fossils – General morphology and classification of Graptolites, Mollusca, Coelenterata, Brachiopod, Trilobita, Echinoids and Foraminifera.

### UNIT V – CRYSTALLOGRAPHY

Definition of crystals – Inter facial angles – Goniometer -Symmetry Elements - Study of Normal Classes of Isometric, Tetragonal, Hexagonal, Orthorhombic, Monoclinic and Triclinic systems - Twin crystals.

### UNIT VI - MINERALOGY

Physical properties of minerals - Petrological Microscope and its parts, accessory plates and uses – optical properties - Isotropic and Anisotropic Minerals - Descriptive study of quartz and its varieties - Feldspar Group - Pyroxene Group - Amphibole Group - Mica Group - Garnet Group - Descriptive study of Calcite, Dolomite, Tourmaline, Topaz, Staurolite, Chlorite and Zircon.

### **UNIT VII - IGNEOUS PETROLOGY**

Definition of magma - Composition and constitution of magma - Forms and structures of Igneous Rocks, Textures and Micro structures - classification of Igneous rocks - Bowen's Reaction principle - Descriptive Study of Granite - Syenite - Diorite - Gabbro - Dolerite - Ultramafics (Dunite, Peridotite, Pyroxenite and Anorthosite) - Differentiation - Assimilation.

### UNIT VIII - SEDIMENTARY AND METAMORPHIC PETROLOGY

Classification - Texture and structures of sedimentary rocks - Descriptive study of Residual, Clastic, Chemical and organic deposits - Metamorphism - Agents and kinds of

metamorphism - classification of metamorphic rocks - Textures and structure - Different facies - Marble - Schist and Gneiss - Amphibolite - Granulite (Charnockite).

### **UNIT IX - ENONIMIC GEOLOGY I**

Definition of Ore - Tenor - Gangue - Lindgren and Bateman's classification of ore deposits - Ore forming processes - Magmatic concentration – Hydrothermal Process Oxidation and Supergene Enrichment – Evaporation - Sedimentation – Placer deposits. Important ores, their composition, physical properties, mode of occurrence, distribution in India and uses of Gold, Iron, Aluminium, Manganese, Copper, Magnesium and Led and Zinc - Lignite, Coal and Petroleum - their occurrence in India - Building Stones, their characters, distribution and mode of occurrence in India - Mineral Wealth of Tamil Nadu.

### **UNIT X - APPLIED GELOLOGY**

Principles of Geological mapping - Field Techniques - Drilling methods - Borehole problems from borehole data — Geological investigation and conditions for dams, tunnels and roads - Landslides — Mining methods, role of geology - problems in mines including groundwater — Application of Remote sensing in Geology.

### **GEOLOGY**

### (POST GRADUATE DEGREE STANDARD)

Code No.240

(ii)

### **UNIT I - GENERAL GEOLOGY AND GEOMORPHOLOGY**

Origin and age of the Earth - Interior of the Earth - Isostasy - Continental drift - Seafloor spreading - Plate tectonics - Volcanoes and earthquakes - Effects and causes - Seismic zonation of India.

Landforms - their types and developments - Classification of shorelines and their evolution – submarine canyons - Geosynclines - Island arcs.

### **UNIT-II - STRATIGRAPHY**

Modern methods of stratigraphic correlation - Cretaceous - Tertiary (K/T) boundary problem with special reference to Tamil Nadu - Nature and age of the Deccan Traps - Cretaceous of Trichy - Classification and economic importance of Dharwar, Cuddapah, Vindhyan, Gondwana group - Palaeozoic formations - Jurassic of Kutch - Siwaliks.

### **UNIT III - PALEONTOLOGY**

Evolution and stratigraphic importance of Ammonoids, Trilobites and Graptolites - Gondwana flora - their significance and paleoclimatic conditions - Field and laboratory techniques of micropaleontology - Application of micropaleontology in oil exploration.

### **UNIT IV - STRUCTURAL GEOLOGY**

Mechanical properties of rocks - Mechanics and causes of folding and faulting - Classification of folds and faults - Recognition of folds and faults in the field - Joints - Types of unconformity and their recognition in the field.

### UNIT V MINERALOGY AND CRYSTALLOGRAPHY

Physical, chemical and optical properties of Feldspars, Feldspathoids, Pyroxene, Amphibole, Olivine and Mica groups - Stereographic and Gnomonic projections of natural crystals of normal classes - Derivation of 32 classes of symmetry - Napier's theorem - Equations of a normal - Bragg's law - X-ray diffraction method.

### **UNIT VI - IGNEOUS PETROLOGY**

Classification of Igneous rocks - Petrography and petrogenesis of Granites, Alkaline rocks, Anorthosites, Carbonatite, Ultramafics - Study of binary and ternary system of crystallisation - Bowen's reaction principle - Diversity of Igneous rocks - variation diagrams - Crystallisation of Basaltic magma.

### UNIT VII – SEDIMENTARY AND METAMORPHIC PETROLOGY

Sedimentary depositional environments – Important clastic and non-clastic rocks – Lithification and Diagenesis – heavy minerals and provenance – Tectonics and sedimentation – Sedimentary basins of India – Paleocurrents and Basin Analysis.

Classification of metamorphic rocks – Metamorphic grades and depth zones – Metamorphic facies – Metamorphic differentiation –Thermal – Cataclastic and Reginal Metamorphism – Origin of Eclogites – Charnockitisation – Granitisation - Metasomatism.

### <u>UNIT VIII - ECONOMIC GEOLOGY</u>

Classification of ore minerals - Geological thermometry - processes of ore formation - minerals used in cement, refractory and ceramic industries.

Origin, occurrence, distribution and uses ores of Iron, Manganese, Copper, Lead, Zinc and Aluminum - Barite, Graphite, Asbestos and Quartz - occurrence and origin of coal and petroleum in India - Beach placers.

### **UNIT IX - HYDROGEOLOGY**

Hydrologic cycle - origin and vertical distribution of Groundwater - Aquifers - Porosity - specific yield and retention - Hydrological properties of important deposits and rocks - Groundwater provinces of India -- Groundwater flow- Hydraulic conductivity - Darcy's Law - Tracer techniques - permeameter - pumping tests - Drilling methods -Estimates of groundwater recharge - Managed aquifer recharge - Seawater intrusion - Groundwater quality and pollution - Electrical methods of groundwater exploration

### **UNIT X - APPLIED GEOLOGY**

Electrical, magnetic, gravity and seismic methods of prospecting - Prospecting for radioactive minerals - Geochemical cycle - Geochemical prospecting - geochemical classification of elements and anomaly - Geological investigation pertaining to Dam foundation, tunnels and roads - Engineering properties of rocks - Types of sampling - ore reserve estimation - Mining methods - Environmental impacts due to mining and mineral processes - Renewable and non-renewable resources - Landslides - Geological hazards including tsunami - Remote sensing, GIS and GPS applications.

#### **GENERAL STUDIES**

### (iii)

#### **Unit-I General science:**

**Physics** Universe-General Scientific laws-Scientific instruments-Inventions and discoveries-National scientific laboratories-Science glossary-Mechanics and properties of matter-Physical quantities, standards and units-Force, motion and energy-Electricity and Magnetism, Electronics and Communication -Heat, light and sound-Atomic and nuclear physics-Solid State Physics – Spectroscopy- Geophysics - Astronomy and space science

**Chemistry** Elements and Compounds-Acids, bases and salts-Oxidation and reduction-Chemistry of ores and metals-Carbon, nitrogen and their compounds-Fertilizers, pesticides, insecticides-Biochemistry and biotechnology-Electrochemistry-Polymers and plastics

**Botany-**Main Concepts of life science-The cell-basic unit of life-Classification of living organism-Nutrition and dietetics-Respiration-Excretion of metabolic waste-Biocommunication

**Zoology-**Blood and blood circulation-Endocrine system-Reproductive system-Genetics the science of heredity-Environment, ecology, health and hygiene, Bio- diversity and its conservation-Human diseases-Communicable diseases and non- communicable diseases- prevention and remedies- Alcoholism and drug abuse-Animals, plants and human life

#### **Unit- II. Current Events**

**History--**Latest diary of events – National--National symbols-Profile of States-Defence, national security and terrorism-World organizations-pacts and summits-Eminent persons & places in news-Sports & games-Books & authors -Awards & honours-Cultural panorama-Latest historical events-- India and its neighbours-- Latest terminology-Appointments-who is who?

**Political Science-1**. India's foreign policy-2. Latest court verdicts – public opinion-3. Problems in conduct of public elections-4. Political parties and political system in India-5. Public awareness & General administration-6. Role of Voluntary organizations & Govt., 7. Welfare oriented govt. schemes, their utility

Geography Geographical landmarks-Policy on environment and ecology—

Economics--Current socio-economic problems-New economic policy & govt. sector

**Science-**Latest inventions on science & technology-Latest discoveries in Health Science-Mass media & communication

#### **Unit-III. Geography**

Earth and Universe-Solar system-Atmosphere hydrosphere, lithosphere-Monsoon, rainfall, weather and climate-Water resources --- rivers in India-Soil, minerals & natural resources-Natural vegetation-Forest & wildlife-Agricultural pattern, livestock & fisheries-Transport including Surface transport & communication-Social geography -

population-density and distribution-Natural calamities – disaster management-Climate change - impact and consequences - mitigation measures-Pollution Control

#### Unit-IV. History and culture of India

Pre-historic events--Indus valley civilization-Vedic, Aryan and Sangam age-Maurya dynasty-Buddhism and Jainism-Guptas, Delhi Sultans, Mughals and Marathas-Age of Vijayanagaram and the bahmanis-South Indian history-Culture and Heritage of Tamil people-Advent of European invasion-Expansion and consolidation of British rule-Effect of British rule on socio-economic factors-Social reforms and religious movements-India since independence-Characteristics of Indian culture-Unity in diversity –race, colour, language, custom-India-as secular state-Organizations for fine arts, dance, drama, music-Growth of rationalist, Dravidian movement in TN-Political parties and populist schemes-Prominent personalities in the various spheres – Arts, Science, literature and Philosophy – Mother Teresa, Swami Vivekananda, Pandit Ravishankar , M.S.Subbulakshmi, Rukmani Arundel and I.Krishnamoorthy etc.

#### **Unit-V INDIAN POLITY**

Constitution of India-. Preamble to the constitution- Salient features of constitution-Citizenship-rights amend duties-Union, State and territory-Fundamental rights-Fundamental duties- Human rights charter-Union legislature - Parliament- State executive- State Legislature - assembly- Status of Jammu & Kashmir- Local government - panchayat raj - Tamil Nadu- Judiciary in India - Rule of law/Due process of law-Indian federalism - center - state relations-. Emergency provisions- Civil services in India- Administrative challenges in a welfare state- Complexities of district administration- Elections - Election Commission Union and State. Official language and Schedule-VIII- Amendments to constitution- Schedules to constitution-. Administrative reforms & tribunals- Corruption in public life- Anti-corruption measures - Central Vigilance Commission, lok-adalats, Ombudsman, - Comptroller and Auditor General of India- Right to information - Central and State Commission- Empowerment of women-Voluntary organizations and public grievances Redressal- Consumer protection forms

### Unit- VI. Indian economy

Nature of Indian economy-Need for economic planning-Five-year plan models-an assessment-Land reforms & agriculture-Application of science in agriculture-Industrial growth-Capital formation and investment-Role of public sector & disinvestment-Development of infrastructure- National income- Public finance & fiscal policy- Price policy & public distribution- Banking, money & monetary policy- Role of Foreign Direct Investment (FDI)- WTO-globalization & privatization- Rural welfare oriented programmes- Social sector problems – population, education, health, employment, poverty-HRD – sustainable economic growth- Economic trends in Tamil Nadu -Energy Different sources and development- Finance Commission -Planning Commission-National Development Council

#### Unit-VI. Indian national movement

National renaissance-Early uprising against British rule-1857 Revolt- Indian National Congress-Emergence of national leaders-Gandhi, Nehru, Tagore, Nethaji -Growth of militant movements -Different modes of agitations-Era of different Acts & Pacts-World war & final phase struggle-Communalism led to partition-Role of Tamil Nadu in freedom struggle - Rajaji, VOC, Periyar, Bharathiar & Others-Birth of political parties /political system in India since independence-

#### **Unit-VII. APTITUDE & MENTAL ABILITY TESTS**

Conversion of information to data-Collection, compilation and presentation of data - Tables, graphs, diagrams-Parametric representation of data-Analytical interpretation of data - Simplification-Percentage-Highest Common Factor (HCF)-Lowest Common Multiple (LCM)-Ratio and Proportion-Simple interest-Compound interest-Area-Volume-Time and Work-Behavioral ability -Basic terms, Communications in information technology-Application of Information and Communication Technology (ICT)- Decision making and problem solving-Logical Reasoning-Puzzles-Dice-Visual Reasoning-Alpha numeric Reasoning-Number Series-Logical Number/Alphabetical/Diagrammatic Sequences-

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