

## RESOLUTION ITU-R 5-8

### Work programme and Questions of Radiocommunication Study Groups

(1993-1995-1997-2000-2003-2007-2012-2015-2019)

The ITU Radiocommunication Assembly,

*considering*

- a) those parts of Resolution ITU-R 1 concerning the Questions to be studied by the Radiocommunication Study Groups;
- b) that, for efficient use of available resources, it is necessary for the Radiocommunication Study Groups to focus on core issues and not undertake studies on issues not within the mandate of ITU-R;
- c) that the amount of work performed by the Bureau depends on the number of contributions made in response to the Questions assigned to the Study Groups;
- d) that it is incumbent upon the Study Groups to conduct continual reviews of their work programme and assigned Questions;
- e) that the duties of the Study Groups in fulfilling the purpose of the Union are described in various provisions of the ITU Constitution and Convention,

*resolves*

- 1 that the work programme of any Radiocommunication Study Group shall be:
  - 1.1 studies, within the scope of the Study Group, on topics relevant to agenda items, Resolutions and Recommendations of Radiocommunication Conferences, or to ITU-R Resolutions;
  - 1.2 the Questions listed in Annexes 1 to 6, referred to the Study Groups;
  - 1.3 studies, within the scope of the Study Group, that will be carried out in accordance with § A1.3.1.2 of Annex 1 of Resolution ITU-R 1 without Questions;

The texts of the Questions listed in Annexes 1 to 6 are to be found in Document 1 of the series of documents for the next study period of the appropriate Study Group taking into account *considering d*);

- 2 that the categories used to identify the priority and urgency of Questions to be studied should be:
  - C: Conference-oriented Questions associated with work related to specific preparations for, and decisions of, world and regional radiocommunication conferences:
    - C1: very urgent and priority studies, required for the next World Radiocommunication Conference;
    - C2: urgent studies, expected to be required for other radiocommunication conferences;
  - S: Questions which are intended to respond to:
    - matters referred to the Radiocommunication Assembly by the Plenipotentiary Conference, any other conference, the Council or the Radio Regulations Board;

- advances in radiocommunication technology or spectrum management;
- changes in radio usage or operation:
  - S1: urgent studies which are intended to be completed within two years;
  - S2: important studies, necessary for the development of radiocommunications;
  - S3: required studies, expected to facilitate the development of radiocommunications;

If necessary, following a world or regional radiocommunication conference, the Director of the Radiocommunication Bureau, in consultation with the Chairmen of the Study Groups concerned, may assign appropriate categories to Questions which are related to the decisions of the conference or to the agendas of future world or regional radiocommunication conferences;

3 that each Question shall:

- be modified to take account of partial answers;
- identify relevant Study Groups working in closely related areas, to which the text of the Question should be sent for consideration;

4 that Study Groups shall consider all their Questions and make proposals to each Assembly:

- for the identification and categorization of Questions;
- for the deletion of Questions, where the study has been completed, where no contributions are expected within the next study period, or, in accordance with § A1.2.1.1 of Annex 1 of Resolution ITU-R 1, where no contributions have been made; such Questions shall be identified as category D;

5 that each Study Group shall report to each Radiocommunication Assembly the progress that has been made in respect of each Question allocated to it with categories C1, C2 or S1;

6 that a Study Group should inform the ITU-R membership about studies without Questions, as stated in *resolves* 1.3, through the ITU website.

## ANNEX 1

**Questions assigned to Radiocommunication Study Group 1****Spectrum management**

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>205-2/1</u></a>	Long-term strategies for spectrum utilization	NOC	S2
<a href="#"><u>208-1/1</u></a>	Alternative methods of national spectrum management	NOC	S2
<a href="#"><u>210-3/1</u></a>	Wireless power transmission	NOC	S3
<a href="#"><u>216-1/1</u></a>	Spectrum redeployment as a method of national spectrum management	NOC	S2
<a href="#"><u>221-2/1</u></a>	Compatibility between radiocommunication systems and high data rate telecommunication systems using wired electrical power supply	NOC	S2
<a href="#"><u>222/1</u></a>	Definition of the spectral properties of transmitter emissions	NOC	S2
<a href="#"><u>232/1</u></a>	Methods and techniques used in space radio monitoring	NOC	S2
<a href="#"><u>235/1</u></a>	Spectrum monitoring evolution	NOC	S3
<a href="#"><u>236/1</u></a>	Impact on radiocommunication systems from wireless and wired data transmission technologies used for the support of power grid management systems	NOC	S3
<a href="#"><u>237/1</u></a>	Technical and operational characteristics of the active services operating in the range 275-1 000 GHz	NOC	S3
<a href="#"><u>238/1</u></a>	Characteristics for use of visible light for broadband communications	NOC	S2
<a href="#"><u>239/1</u></a>	Electronic field measurements to assess human exposure	NOC	S3
<a href="#"><u>240/1</u></a>	Assessment of spectrum efficiency and economic value	NOC	S2
<a href="#"><u>241/1</u></a>	Methodologies for assessing or predicting spectrum availability	NOC	S3

## ANNEX 2

**Questions assigned to Radiocommunication Study Group 3****Radiowave propagation**

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>201-7/3</u></a>	Radiometeorological data required for the planning of terrestrial and space communication systems and space research application	NOC	S2
<a href="#"><u>202-4/3</u></a>	Methods for predicting propagation over the surface of the Earth	NOC	S2
<a href="#"><u>203-8/3</u></a>	Propagation prediction methods for terrestrial broadcasting, fixed (broadband access) and mobile services using frequencies above 30 MHz	NOC	S1
<a href="#"><u>204-6/3</u></a>	Propagation data and prediction methods required for terrestrial line-of-sight systems	NOC	S2
<a href="#"><u>205-2/3</u></a>	Propagation data and prediction methods required for trans-horizon systems	NOC	S2
<a href="#"><u>206-4/3</u></a>	Propagation data and prediction methods for fixed and broadcasting-satellite services	NOC	S2
<a href="#"><u>207-5/3</u></a>	Propagation data and prediction methods for satellite mobile and radiodetermination services above about 0.1 GHz	NOC	S2
<a href="#"><u>208-6/3</u></a>	Propagation factors in frequency sharing issues affecting space radiocommunication services and terrestrial services	NOC	S2
<a href="#"><u>209-2/3</u></a>	Variability and risk parameters in system performance analysis	NOC	S3
<a href="#"><u>211-7/3</u></a>	Propagation data and propagation models in the frequency range 300 MHz to 450 GHz for the design of short-range wireless radiocommunication systems and wireless local area networks (WLAN)	NOC	S3
<a href="#"><u>212-3/3</u></a>	Ionospheric properties	NOC	S3
<a href="#"><u>213-4/3</u></a>	The short-term forecasting of operational parameters for trans-ionospheric radiocommunication and aeronautical radionavigation services	NOC	S3
<a href="#"><u>214-6/3</u></a>	Radio noise	NOC	S2
<a href="#"><u>218-6/3</u></a>	Ionospheric influences on satellite systems	NOC	S3
<a href="#"><u>222-5/3</u></a>	Measurements and data banks of ionospheric characteristics and radio noise	NOC	S3
<a href="#"><u>225-7/3</u></a>	The prediction of propagation factors affecting systems at LF and MF including the use of digital modulation techniques	NOC	S3
<a href="#"><u>226-5/3</u></a>	Ionospheric and tropospheric characteristics along satellite-to-satellite paths	NOC	S3

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>228-3/3</u></a>	Propagation data required for the planning of radiocommunication systems operating above 275 GHz	NOC	C1
<a href="#"><u>229-3/3</u></a>	Prediction of sky-wave propagation conditions, signal intensity, circuit performance and reliability at frequencies between about 1.6 and 30 MHz, in particular for systems using digital modulation techniques	NOC	S3
<a href="#"><u>230-3/3</u></a>	Prediction methods and models applicable to power line telecommunications systems	NOC	S2
<a href="#"><u>231-1/3</u></a>	The effect of electromagnetic emissions from man-made sources on the radiocommunication systems and networks	NOC	S2
<a href="#"><u>233-1/3</u></a>	Methods for the prediction of propagation path losses between an airborne platform and a satellite, ground terminal or another airborne platform	NOC	S2
<a href="#"><u>234/3</u></a>	Computation of ionospheric scintillation indices	NOC	S3
<a href="#"><u>235/3</u></a>	Impact of engineered electromagnetic surfaces on radiowave propagation	NOC	S3

## ANNEX 3

**Questions assigned to Radiocommunication Study Group 4\*****Satellite services**

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>42-1/4</u></a>	Characteristics of antennas at earth stations in the fixed-satellite service	NOC	S1
<a href="#"><u>46-3/4</u></a>	Preferred multiple-access characteristics in the fixed-satellite service	NOC	S2
<a href="#"><u>70-1/4</u></a>	Protection of the geostationary-satellite orbit against unacceptable interference from transmitting earth stations in the fixed-satellite service at frequencies above 15 GHz	NOC	S3
<a href="#"><u>73-2/4</u></a>	Availability and interruptions to traffic on digital paths in the fixed-satellite service	NOC	S2
<a href="#"><u>83-6/4</u></a>	Efficient use of the radio spectrum and frequency sharing within the mobile-satellite service	NOC	S1
<a href="#"><u>84-4/4</u></a>	Use of non-geostationary-satellite orbits in mobile-satellite services	NOC	S2
<a href="#"><u>87-4/4</u></a>	Transmission characteristics for a mobile-satellite communication system	NOC	S2
<a href="#"><u>88-1/4</u></a>	Propagation and mobile earth station antenna characteristics for mobile-satellite services	NOC	S3
<a href="#"><u>91-1/4</u></a>	Technical and operating characteristics of the radiodetermination-satellite service	NOC	S2
<a href="#"><u>109-1/4</u></a>	Global Maritime Distress and Safety System requirements for mobile-satellite systems operating in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz	NOC	S1
<a href="#"><u>110-1/4</u></a>	Interference to the aeronautical mobile-satellite (R) service	NOC	S2
<a href="#"><u>201-1/4</u></a>	Frequency sharing between mobile-satellite services and other services	NOC	S2
<a href="#"><u>203-1/4</u></a>	The impact of using small antennas on the efficient use of the geostationary-satellite orbit	NOC	S2
<a href="#"><u>205-1/4</u></a>	Frequency sharing between non-geostationary satellite feeder links in the fixed-satellite service used by the mobile-satellite service	NOC	S2
<a href="#"><u>208/4</u></a>	Use of statistical and stochastic methods in evaluation of interference between satellite networks in the fixed-satellite service	NOC	S3
<a href="#"><u>209/4</u></a>	The use of frequency bands allocated to the fixed-satellite service for both the up and down links of geostationary-satellite systems	NOC	S2

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\* Refer to footnote for this Study Group in Resolution ITU-R 4.

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>210-1/4</u></a>	Technical characteristics for mobile earth stations operating with global non-geostationary-satellite systems in the mobile-satellite service in the band 1-3 GHz	NOC	S1
<a href="#"><u>211-2/4</u></a>	Interference criteria and calculation methods for the mobile-satellite service	NOC	S2
<a href="#"><u>214/4</u></a>	Technical implications of steerable and reconfigurable satellite beams	NOC	S1
<a href="#"><u>217-2/4</u></a>	Interference to the radionavigation-satellite service in the ICAO global navigation satellite system	NOC	S1
<a href="#"><u>218-1/4</u></a>	Compatibility between on-board processing satellites in the fixed-satellite service and terrestrial networks	NOC	S2
<a href="#"><u>227/4</u></a>	Technical and operational characteristics of emergency communications in the mobile-satellite service	NOC	S1
<a href="#"><u>231/4</u></a>	Sharing between networks of the fixed-satellite service using non-geostationary satellites and other networks of the fixed-satellite service	NOC	S2
<a href="#"><u>233/4</u></a>	Dedicated user digital satellite communications systems and their associated architectures	NOC	S2
<a href="#"><u>236/4</u></a>	Interference criteria and calculation methods for the fixed-satellite service	NOC	S2
<a href="#"><u>244/4</u></a>	Sharing between feeder links of the mobile-satellite (non-geostationary) service in the band 5 091-5 250 MHz and the aeronautical radionavigation service in the band 5 000-5 250 MHz	NOC	S2
<a href="#"><u>245-1/4</u></a>	Out-of-band and spurious emission limits	NOC	S1
<a href="#"><u>248/4</u></a>	Frequency sharing between systems in the fixed-satellite service and wireless digital networks around 5 GHz	NOC	S3
<a href="#"><u>263-1/4</u></a>	Performance objectives of digital links in the fixed-satellite service for transmission of Internet or higher layer Protocol packets	NOC	S1
<a href="#"><u>264/4</u></a>	Technical and operational characteristics of networks of the fixed-satellite service operating above 275 GHz	NOC	S2
<a href="#"><u>266/4</u></a>	Technical characteristics of high-density fixed-satellite service earth stations operating with geostationary satellite orbit fixed-satellite service networks in the 20/30 GHz bands	NOC	S2
<a href="#"><u>267/4</u></a>	Technical and operational considerations relating to the advance publication, coordination and notification of fixed-satellite networks	NOC	S2
<a href="#"><u>268/4</u></a>	Development of methodologies for the assessment of satellite unwanted emission levels before launch	NOC	S3
<a href="#"><u>270-1/4</u></a>	Fixed-satellite service systems using very wideband spreading signals	NOC	S2

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>271/4</u></a>	Interference between satellite news gathering (SNG) carriers by unintentional access	NOC	S1
<a href="#"><u>272/4</u></a>	Frequency sharing between the FSS and the space research service in the 37.5-38 GHz and 40-40.5 GHz bands	NOC	S2
<a href="#"><u>273/4</u></a>	Support of the modernization of civil aviation telecommunication systems and the extension of telecommunication systems to remote and developing regions with current and planned satellite networks	NOC	S1
<a href="#"><u>274/4</u></a>	Technical methods for improving the spectrum/orbit utilization	NOC	S1
<a href="#"><u>275/4</u></a>	Performance objectives of digital links in the fixed-satellite and mobile-satellite services forming elements of the Next Generation Network	NOC	S2
<a href="#"><u>276/4</u></a>	Availability of digital paths in mobile-satellite services	NOC	S2
<a href="#"><u>277-1/4</u></a>	Performance objectives for digital fixed-satellite and mobile-satellite services with variable bit-rate paths	NOC	S2
<a href="#"><u>278/4</u></a>	Use of operational facilities to meet power flux-density limitation under Article 21 of the Radio Regulations	NOC	S1
<a href="#"><u>279/4</u></a>	Satellite broadcasting of high-definition television	NOC	S1
<a href="#"><u>280/4</u></a>	Receiving earth station antennas for the broadcasting-satellite service	NOC	S1
<a href="#"><u>281/4</u></a>	Digital techniques in the broadcasting-satellite service (sound and television)	NOC	S1
<a href="#"><u>282/4</u></a>	Frequency sharing issues related to the introduction of the broadcasting-satellite service (sound) in the frequency range 1-3 GHz	NOC	S1
<a href="#"><u>283/4</u></a>	Sharing studies between high-definition television in the broadcasting-satellite service and other services	NOC	S1
<a href="#"><u>284/4</u></a>	Spectrum management issues related to the introduction of the broadcasting-satellite service (sound) in the frequency range 1-3 GHz	NOC	S1
<a href="#"><u>285/4</u></a>	Digital broadcasting of multiple services and programmes in the broadcasting-satellite service	NOC	S1
<a href="#"><u>286/4</u></a>	Contributions of the mobile and amateur services and associated satellite services to the improvement of disaster communications	NOC	S2
<a href="#"><u>287/4</u></a>	Technical and operational characteristics for packet network transmission in mobile-satellite services	NOC	S1
<a href="#"><u>288/4</u></a>	Characteristics and operational requirements of radionavigation-satellite service (space-to-Earth, space-to-space, Earth-to-space) systems	NOC	S2



<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>289/4</u></a>	Interactive satellite broadcasting systems (television, sound and data)	NOC	S1
<a href="#"><u>290/4</u></a>	Broadcasting-satellite means for public warning, disaster mitigation and relief	NOC	S1
<a href="#"><u>291/4</u></a>	System architecture and performance aspects on integrated MSS systems	NOC	S2
<a href="#"><u>292/4</u></a>	UHDTV satellite broadcasting systems	NOC	S1
<a href="#"><u>293/4</u></a>	Antenna radiation diagrams/patterns for small ( $D/\lambda$ around 30) earth station antennas used in fixed-satellite and broadcasting-satellite systems	NOC	S2

## ANNEX 4

**Questions assigned to Radiocommunication Study Group 5****Terrestrial services**

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>1-6/5</u></a>	Interference protection ratios and minimum field strengths required in the land mobile services	NOC	S2
<a href="#"><u>7-7/5</u></a>	Characteristics of equipment for the land mobile service between 30 and 6 000 MHz	NOC	S2
<a href="#"><u>37-6/5</u></a>	Digital land mobile systems for specific applications	NOC	S2
<a href="#"><u>48-7/5</u></a>	Techniques and frequency usage in the amateur service and amateur-satellite service	NOC	S2
<a href="#"><u>62-2/5</u></a>	Interference to the aeronautical mobile and aeronautical radionavigation services	NOC	S2
<a href="#"><u>77-7/5</u></a>	Consideration of the needs of developing countries in the development and implementation of IMT	UNA	S2
<a href="#"><u>101-4/5</u></a>	Quality of service requirements in the land mobile service	UNA	S2
<a href="#"><u>110-3/5</u></a>	Reference radiation patterns of point-to-point fixed wireless system antennas for use in sharing studies	NOC	S2
<a href="#"><u>205-5/5</u></a>	Intelligent transport systems	UNA	S2
<a href="#"><u>209-5/5</u></a>	Use of the mobile, amateur and amateur-satellite services in support of disaster radiocommunications	UNA	S2
<a href="#"><u>212-4/5</u></a>	Nomadic wireless access systems including radio local area networks	NOC	S2
<a href="#"><u>215-4/5</u></a>	Frequency bands, technical characteristics, and operational requirements for fixed wireless access systems in the fixed and/or land mobile services	NOC	S2
<a href="#"><u>229-4/5</u></a>	Future development of the terrestrial component of IMT	UNA	S2
<a href="#"><u>235/5</u></a>	Protection criteria for aeronautical and maritime systems	NOC	S2
<a href="#"><u>238-2/5</u></a>	Mobile broadband wireless access systems	UNA	S2
<a href="#"><u>241-3/5</u></a>	Cognitive radio systems in the mobile service	UNA	S2
<a href="#"><u>242-2/5</u></a>	Reference radiation patterns of omnidirectional and sectoral antennas for the fixed and mobile services for use in sharing studies	NOC	S2
<a href="#"><u>246/5</u></a>	Technical characteristics and channelling requirements for adaptive HF systems	UNA	S2
<a href="#"><u>247-1/5</u></a>	Radio-frequency arrangements for fixed wireless systems	NOC	S2

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>248/5</u></a>	Technical and operational characteristics for systems in the fixed service used for disaster mitigation and relief	NOC	S2
<a href="#"><u>250-1/5</u></a>	Mobile wireless access systems providing telecommunications for a large number of ubiquitous sensors and/or actuators scattered over wide areas as well as machine to machine communications in the land mobile service	NOC	S2
<a href="#"><u>252/5</u></a>	Frequency sharing and compatibility between systems in the fixed service and systems in other services	NOC	S2
<a href="#"><u>253/5</u></a>	Fixed service use and future trends	NOC	S2
<a href="#"><u>254/5</u></a>	Operation of short-range radiocommunication public access system supporting hearing aid systems	NOC	S2
<a href="#"><u>255/5</u></a>	Performance and availability objectives and requirements for fixed wireless systems, including packet-based systems	UNA	S2
<a href="#"><u>256/5</u></a>	Technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz	UNA	S2
<a href="#"><u>257/5</u></a>	Technical and operational characteristics of stations in the fixed service in the frequency range 275-1 000 GHz	UNA	S2
<a href="#"><u>258/5</u></a>	Technical and operational principles for HF sky-wave communication stations to improve the man-made noise HF environment	NOC	S2
<a href="#"><u>259/5</u></a>	Operational and radio regulatory aspects for planes operating in the upper level of the atmosphere	NOC	S2
<a href="#"><u>260/5</u></a>	Coexistence analysis between foreign object debris detection systems operating in the frequency range 92 to 100 GHz and earth exploration satellite service sensors in-band and in adjacent bands	NOC	S2
	Draft new Question ITU-R [CAV]/5 – Radiocommunication requirements for connected automated vehicles (CAV)	UNA	S2
	Draft new Question ITU-R [IMT.SPECIFIC APPLICATIONS]/5 – Usage of terrestrial component of IMT systems for specific applications	UNA	S2

## ANNEX 5

**Questions assigned to Radiocommunication Study Group 6\*****Broadcasting service**

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>12-3/6</u></a>	Generic bit-rate reduction coding of digital video signals for production, for contribution, for primary and secondary distribution, for emission and for related applications	NOC	S2
<a href="#"><u>19-1/6</u></a>	Bit-rate reduction coding of audio signals for broadcasting applications	NOC	S2
<a href="#"><u>30/6</u></a>	Transmitting and receiving antennas at VHF and UHF	NOC	S2
<a href="#"><u>32-1/6</u></a>	Protection requirements of broadcasting systems against interference from radiation caused by wired telecommunication systems, from emissions of industrial, scientific and medical equipment, and from emissions of short-range devices	NOC	S2
<a href="#"><u>34-3/6</u></a>	File formats and transport for the exchange of audio, video, data and metadata materials in the professional broadcast environments	NOC	S2
<a href="#"><u>44-4/6</u></a>	Objective picture quality parameters and associated measurement and monitoring methods for digital television images	NOC	S3
<a href="#"><u>45-6/6</u></a>	Broadcasting of multimedia and data applications	NOC	S2
<a href="#"><u>49-1/6</u></a>	Conditional-access broadcasting systems	NOC	S2
<a href="#"><u>56-4/6</u></a>	Characteristics of terrestrial digital sound/multimedia broadcasting systems for reception by vehicular, portable and fixed receivers	NOC	S2
<a href="#"><u>65/6</u></a>	Spectrum requirements for sound broadcasting	NOC	S1
<a href="#"><u>69-1/6</u></a>	Conditions for a satisfactory television service in the presence of reflected signals	NOC	S2
<a href="#"><u>102-4/6</u></a>	Methodologies for subjective assessment of audio and video quality	NOC	S2
<a href="#"><u>105/6</u></a>	Spectrum requirements for television broadcasting	NOC	S1
<a href="#"><u>109/6</u></a>	In-service monitoring of perceived audiovisual quality for broadcasting and distribution networks	NOC	S2
<a href="#"><u>111-1/6</u></a>	Technical methods for the protection of the privacy of end-users in interactive broadcasting systems (television, sound and data)	NOC	S2
<a href="#"><u>114/6</u></a>	Characteristics of television receivers and receiving antennas essential for frequency planning	NOC	S2

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\* Refer to footnote for this Study Group in Resolution ITU-R 4.

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>118-1/6</u></a>	Broadcasting means for public warning, disaster mitigation and relief	NOC	S2
<a href="#"><u>120/6</u></a>	Digital sound broadcasting in Region 2	NOC	S2
<a href="#"><u>124/6</u></a>	Measurement methods for the verification and validation of digital television and sound broadcasting planning procedures	NOC	S2
<a href="#"><u>126-1/6</u></a>	Recommended operating practices to tailor television programme material to broadcasting applications at various image quality levels display sizes and aspect ratios	NOC	S2
<a href="#"><u>129/6</u></a>	Impact of audio signal processing and compression techniques on terrestrial FM sound broadcasting emissions at VHF	NOC	S2
<a href="#"><u>130-3/6</u></a>	Digital interfaces for production, post-production and international exchange of sound and television programmes for broadcasting	NOC	S2
<a href="#"><u>131-1/6</u></a>	Common core data format for multimedia broadcasting	NOC	S2
<a href="#"><u>132-5/6</u></a>	Digital terrestrial television broadcasting planning	NOC	S3
<a href="#"><u>133-2/6</u></a>	Enhancements of digital terrestrial television broadcasting	NOC	S3
<a href="#"><u>135-2/6</u></a>	System parameters for and management of digital sound systems with and without accompanying picture	NOC	S2
<a href="#"><u>136-2/6</u></a>	Worldwide broadcasting roaming	NOC	S2
<a href="#"><u>137-1/6</u></a>	Internet Protocol (IP) interfaces for programme production and exchange	NOC	S3
<a href="#"><u>138/6</u></a>	Methods for signalling loudness compliance	NOC	S2
<a href="#"><u>139-2/6</u></a>	Methods for rendering of advanced audio formats	NOC	S2
<a href="#"><u>140-1/6</u></a>	Global platform for the broadcasting service	NOC	S2
<a href="#"><u>142-3/6</u></a>	High dynamic range television for broadcasting	NOC	S2
<a href="#"><u>143-1/6</u></a>	Advanced Immersive Audio-Visual Systems for Programme Production and Exchange for Broadcasting	NOC	S2
<a href="#"><u>144/6</u></a>	Use of Artificial Intelligence (AI) for broadcasting	NOC	S2
<a href="#"><u>145/6</u></a>	Systems for enabling access to broadcast and cooperative media for persons with disabilities	NOC	S2
<a href="#"><u>146/6</u></a>	Spectrum requirements for terrestrial broadcasting	NOC	S1

## ANNEX 6

## Questions assigned to Radiocommunication Study Group 7

## Science services

Question ITU-R	Title	Status	Category
<a href="#">110-2/7</a>	Time codes	NOC	S2
<a href="#">111-1/7</a>	Signal delays in antennas and other circuits and their calibration for high-accuracy time transfer	NOC	S2
<a href="#">118-2/7</a>	Factors which affect frequency sharing between data relay satellite systems and systems of other services	NOC	S2
<a href="#">129-3/7</a>	Unwanted emissions radiated from and received by stations of the science services	NOC	S2
<a href="#">139-4/7</a>	Data transmission for Earth exploration-satellite systems	NOC	S2
<a href="#">141-4/7</a>	Data transmission for meteorological satellite systems	NOC	S2
<a href="#">145-3/7</a>	Technical factors relating to the protection of radioastronomical observations	NOC	S2
<a href="#">146-2/7</a>	Criteria for evaluation of interference to radio astronomy	NOC	S2
<a href="#">152-2/7</a>	Standard frequencies and time signals from satellites	NOC	S2
<a href="#">207-3/7</a>	Time and frequency transfer using digital communication links	NOC	S2
<a href="#">211/7</a>	Frequency sharing between the space research service and other services in the 37-38 GHz and 40-40.5 GHz bands	NOC	S2
<a href="#">221/7</a>	Preferred frequency bands and protection criteria for space research service observations (passive)	NOC	S2
<a href="#">222-2/7</a>	Radio links between earth stations and lunar and planetary missions by means of lunar and/or planetary data relay satellites	NOC	S2
<a href="#">226-2/7</a>	Frequency sharing between the radio astronomy service and other services in bands between 67 and 275 GHz	NOC	S2
<a href="#">230-1/7</a>	Preferred frequency bands and protection criteria for radio astronomy measurements in space	NOC	S2
<a href="#">231/7</a>	Earth exploration-satellite service (active) and space research service (active) operating above 100 GHz	NOC	S2
<a href="#">234/7</a>	Frequency sharing between active sensor systems in the Earth exploration-satellite service and systems operating in other services in the 1 215-1 300 MHz band	NOC	S2
<a href="#">236-2/7</a>	The future of the UTC time scale	NOC	C2
<a href="#">237/7</a>	Technical and operational factors relating to interference mitigation practices at radio astronomy stations	NOC	S2

<b>Question ITU-R</b>	<b>Title</b>	<b>Status</b>	<b>Category</b>
<a href="#"><u>238/7</u></a>	Trusted time source for time stamp authority	NOC	S2
<a href="#"><u>239/7</u></a>	Instrumentation time codes	NOC	S2
<a href="#"><u>242/7</u></a>	Radio quiet zones	NOC	S2
<a href="#"><u>244/7</u></a>	Interference between standard frequency and time signal services operating between 20 and 90 kHz	NOC	S2
<a href="#"><u>245/7</u></a>	Interference to the standard frequency and time signal service in the low-frequency band caused by noise from electrical sources	NOC	S2
<a href="#"><u>246/7</u></a>	Future bandwidth requirements for the space research service (deep space)	NOC	S2
<a href="#"><u>247/7</u></a>	Emergency radiocommunications for human space flight	NOC	S2
<a href="#"><u>248/7</u></a>	Timing Information from Global Navigation Satellite Systems (GNSS) and their augmentations	NOC	S2
<a href="#"><u>249/7</u></a>	Time and frequency information from “enhanced” LORAN (eLORAN)	NOC	S2
<a href="#"><u>250/7</u></a>	Application and improvement of two-way satellite time and frequency transfer (TWSTFT)	NOC	S2
<a href="#"><u>251/7</u></a>	Ground-based passive sensors	NOC	S2
<a href="#"><u>253/7</u></a>	Relativistic effects in the transfer of time and frequency in the vicinity of the Earth and in the solar system	NOC	S2
<a href="#"><u>255/7</u></a>	Detection and resolution of radio frequency interference to Earth exploration-satellite service (passive) sensors	NOC	S1
<a href="#"><u>256/7</u></a>	Space weather observations	NOC	S3
<a href="#"><u>257/7</u></a>	Technical and operational characteristics of radio astronomy applications operating above 275 GHz	NOC	S2