

परिशिष्ट-1 (ANNEXURE-1)

S. No	Country	Mission Name	Mission Type	Launch Date & Year	Mission Duration	Responsible Agency	Instrument Payloads
1.	Soviet Union	Luna -1	Flyby	Jan 2, 1959	1/2/1959	unknown (USSR)	Scintillation + Geiger Counters, Triaxial Fluxgate Magnetometer
2.	United States	Pioneer - 4	Flyby	Mar 3, 1959		NASA (USA)	
3.	Soviet Union	Luna -2	lander	Sep 12, 1959	09/12/1959	unknown (USSR)	Triaxial Fluxgate Magnetometer
4.	Soviet Union	Luna - 3	fly by	Oct 4, 1959	10/22/1959	unknown (USSR)	Yenisey-2 Phototelevision System
5.	United States	Ranger - 1	Attempted Test Flight	Aug 23, 1961			
6.	United States	Ranger - 2	Attempted Test Flight	Nov 18, 1961			
7.	United States	Ranger - 3	Attempted Test Flight	Jan 26, 1962			
8.	United States	Ranger - 4	Impact	Apr 23, 1962			
9.	United States	Ranger - 5		Oct 18, 1962			
10.	Soviet Union	Luna - 4	fly by	Apr 2, 1963	4/7/1963	unknown (USSR)	Imaging System, Radiation Detector
11.	United States	Ranger - 6	lander	Jan 30, 1964		NASA (USA)	
12.	United States	Ranger - 7	lander	Jul 28, 1964	07/31/1964	NASA (USA)	
13.	United States	Ranger - 8	lander	Feb 17, 1965	02/20/1965 (64.9 hours)	NASA (USA)	
14.	United States	Ranger - 9	lander	Mar 21, 1965	03/24/1965 (64.5 hours)	NASA (USA)	
15.	Soviet Union	Luna - 5	lander	May 9, 1965	5/9/1965	unknown (USSR)	Imaging System, Radiation Detector
16.	Soviet Union	Luna - 6	lander	Jun 8, 1965	6/8/1965	unknown (USSR)	Imaging System, Radiation Detector
17.	Soviet Union	Zond - 3	fly by	Jul 18, 1965	07/18/1965	unknown (USSR)	Energetic Particles, MSU-TASPD, Photography
18.	Soviet Union	Luna - 7	lander	Oct 4, 1965	10/07/1965	unknown (USSR)	
19.	Soviet Union	Luna - 8	lander	Dec 3, 1965	12/06/1965	unknown (USSR)	
20.	Soviet Union	Luna - 9	lander	Jan 31, 1966	02/06/1966	unknown (USSR)	Close-up Lunar Surface, Radiation Detector.
21.	Soviet Union	Luna - 10	orbiter	Mar 31, 1966	05/30/1966	unknown (USSR)	Charged Particle Detector, Gamma-Ray Spectrometer, Gas Discharge Counters, Gas

							Discharge Detectors, Infrared Detector,
22.	United States	Surveyor - 1	lander	May 30, 1966	1/07/1967	NASA (USA)	Strain Gauge, Television
23.	United States	Lunar Orbiter - 1	orbiter/impact or	Aug 10, 1966	10/29/1966	NASA (USA)	Photographic System (dual-lens camera, a film processor, and readout system),
24.	Soviet Union	Luna - 11	orbiter	Aug 24, 1966	10/01/1966	unknown (USSR)	
25.	United States	Surveyor - 2	lander	Sep 20, 1966	09/23/1966	NASA (USA)	
26.	Soviet Union	Luna - 12	orbiter	Oct 22, 1966	01/19/1967	unknown (USSR)	Television System,
27.	United States	Lunar Orbiter - 2	orbiter/impact or	Nov 6, 1966	10/11/1967	NASA (USA)	Photographic System (dual-lens camera, a film processor, and readout system)
28.	Soviet Union	Luna - 13	lander	Dec 21, 1966	12/30/1966	unknown (USSR)	Close-up Lunar Surface, Dynamograph, Mechanical Soil-measuring penetrometer
29.	United States	Lunar Orbiter - 3	orbiter/impact or	Feb 4, 1967	10/09/1967	NASA (USA)	Photographic System (dual-lens camera, a film processor, and readout system)
30.	United States	Surveyor - 3	lander	Apr 17, 1967	04/17/1967 - duration 65 hours	NASA (USA)	Soil Mechanics Surface Sampler, Television
31.	United States	Lunar Orbiter - 4	orbiter/impact or	May 8, 1967	10/31/1967	NASA (USA)	Photographic System (dual-lens camera, a film processor, and readout system)
32.	United States	Surveyor - 4	lander	Jul 14, 1967	07/17/1967	NASA (USA)	
33.	United States	Lunar Orbiter - 5	orbiter/impact or	Aug 1, 1967	01/31/1968	NASA (USA)	Photographic System (dual-lens camera, a film processor, and readout system)
34.	United States	Surveyor - 5	lander	Sep 8, 1967	12/17/1967	NASA (USA)	
35.	United States	Surveyor - 6	lander	Nov 7, 1967	11/24/1967	NASA (USA)	
36.	United States	Surveyor - 7	lander	Jan 7, 1968	01/07/1968, duration 36 hours- 21 minutes	NASA (USA)	Alpha-Scattering Surface Analyzer, Soil Mechanics Surface Sampler, Television Photography
37.	Soviet Union	Luna - 14	orbiter	Apr 7, 1968	4/7/1968	unknown (USSR)	

38.	Soviet Union	Zond - 5	fly by	Sep 15, 1968	09/21/1968	unknown (USSR)	Proton Detectors
39.	United States	Apollo - 7		Oct 11, 1968			
40.	Soviet Union	Zond - 6	fly by	Nov 10, 1968	11/17/1968	Soviet Academy of Sciences	Lunar Photography
41.	United States	Apollo - 8	orbiter	Dec 21, 1968	6 days, 3 hours	NASA (USA)	Cameras-various: two 70-mm Hasselblad cameras, 16-mm Maurer camera
42.	United States	Apollo - 9		Mar 3, 1969			
43.	United States	Apollo - 10	orbiter	May 18, 1969	8 days, 3 minutes	NASA (USA)	Cameras-various: modified Hasselblad 500 EL cameras
44.	Soviet Union	Luna - 15	lander	Jul 13, 1969	07/21/1969	unknown (USSR)	
45.	United States	Apollo - 11	lander	Jul 16, 1969	8 days, 3 hours, 18 minutes	NASA (USA)	Apollo Light Flash Moving Emulsion Detector, Laser Ranging Retroreflector, Passive Seismic Experiment Package
46.	Soviet Union	Zond - 7	fly by	Aug 7, 1969	8/14/1969	Soviet Academy of Sciences (USSR)	Lunar Photography
47.	United States	Apollo - 12	lander	Nov 14, 1969	10 days, 4 hours, 36 minutes	NASA (USA)	Apollo Light Flash Moving Emulsion Detector, Cameras-various; one 70-mm Hasselblad electric camera, Suprathermal Ion Detector Experiment (part of ALSEP)
48.	United States	Apollo - 13	orbiter	Apr 11, 1970	5 days, 22.9 hours	NASA (USA)	Atmospheric Electrical Phenomena, Cameras-camera use was limited to two 70-mm, Pilot Describing Function,
49.	Soviet Union	Luna - 16	sample return	Sep 12, 1970	9/24/1970	unknown (USSR)	Lunar Soil Sampler, Radiation Monitor, Television System, Temperature Monitor
50.	Soviet Union	Zond - 8	fly by	Oct 20, 1970	10-27-1970	Soviet Academy of Sciences (USSR)	Lunar Photography,

51.	Soviet Union	Luna – 17 /Lunokhod - 1	lander	Nov 10, 1970	11/10/1970	unknown (USSR)	Energetic Particles, MSU-TASPD, Lunokhod 1
52.	United States	Apollo - 14	lander	Jan 31, 1971	9 days	NASA (USA)	Active Seismic Experiment (part of ALSEP), Soil Mechanics, Solar Wind Composition, Suprathermal Ion
53.	United States	Apollo - 15	lander	Jul 26, 1971	12 days, 7 hours, 12 minutes	NASA (USA)	Apollo Light Flash Moving Emulsion Detector, Experiment, Soil Mechanics, Suprathermal Ion Detector Experiment
54.	Soviet Union	Luna - 18	lander	Sep 2, 1971	09/11/1971	unknown (USSR)	
55.	Soviet Union	Luna - 19	orbiter	Sep 28, 1971	9/28/1971	unknown (USSR)	Energetic Particles, MSU-TASPD
56.	Soviet Union	Luna - 20	lander	Feb 14, 1972	02/25/1972	unknown (USSR)	Drill, TV Imaging
57.	United States	Apollo - 16	lander	Apr 16, 1972	11 days, 1 hour, 51 minutes	NASA (USA)	Active Seismic Experiment, Lunar Rover Vehicle, Lunar Surface Cosmic Ray Experiment, Soil Mechanics, Solar Wind Composition,
58.	United States	Apollo - 17	lander	Dec 7, 1972	12 days, 13 hours, 52 minutes	NASA (USA)	Cameras-various, Heat Flow and Convection, Electrical Properties, Traverse Gravimeter Experiment.
59.	Soviet Union	Luna – 21 /Lunokhod - 2	lander	Jan 8, 1973	6/0/1973	unknown (USSR)	Lunar Laser Retro-Reflector
60.	Soviet Union	Luna – 22	orbiter	Jun 2, 1974	11/0/1974	unknown (USSR)	Lunar Photography
61.	Soviet Union	Luna – 23	lander	Oct 28, 1974	10/31/1974	unknown (USSR)	
62.	Soviet Union	Luna – 24	sample return	Aug 14, 1976	8/22/1976	unknown (USSR)	
63.	Japan (ISAS)	Hiten	orbiter	Jan 24, 1990	04/10/1993	Institute of Space and Aeronautical Science (Japan)	

64.	United States (NASA/ DoD)	Clementine	orbiter	Jan 25, 1994	6/0/1994	DOD / NASA (USA)	Bistatic Radar Experiment, Star Tracker Camera, Ultraviolet/Visible Camera
65.	United States (Hughes)	Asia Sat – 3/HGS - 1	Lunar Flyby	Dec 24, 1997			
67.	United States	Lunar Prospector	orbiter/impactor	Jan 7, 1998	07/31/1999	NASA (USA)	Alpha Particle Spectrometer, Doppler Gravity Experiment, Electron Reflectometer, Gamma Ray Spectrometer,
68.	European (ESA)	SMART - 1	Orbiter	Sep ,27 2003		European Space Agency (ESA)	
69.	Japan (JAXA)	Kaguya (SELENE)	orbiter	Sep 14, 2007	09-14-2007-current	JAXA (Japan)	Differential VLBI Radio Source, Gamma-ray Spectrometer, Spectral Profiler, Terrain Camera, Upper Atmosphere and Plasma Imager, X-ray Spectrometer.
70.	China (CNSA)	Chang'e - 1	Orbiter	Oct 24, 2007			
71.	India (ISRO)	Chandrayaan - 1	orbiter	Oct 22, 2008	10/22/2008-current	ISRO (India)	Chandrayaan-1 Imaging X-ray Spectrometer, High Energy X-ray Spectrometer, Terrain Mapping Camera, X-ray Solar Monitor.
72.	Japan (JAXA)	Lunar - A	Orbiter and Penetrators	Cancelled			
73.	United States	LRO	orbiter	Jun 18,2009		NASA (USA)	Cosmic Ray Telescope for Effects of Radiation, Lyman Alpha Mapping Project, Mini-RF Technology Demonstration.
74.	United States	LCROSS	impactor	Jun 18, 2009		NASA (USA)	Data Handling Unit, B, NIR Camera, A, NIR Camera, B, NIR Spectrometer, Visible Context Camera,
75.	China (CNSA)	Chang'e - 2	Orbiter	Oct 1, 2010			
76.	United States	ARTEMIS	Orbiter	2010			

77.		GRAIL	Orbiter	Sept 8, 2011			
78.	China (CNSA)	Chang'e - 3	Orbiter	2013			
79.	United States	LADEE	Orbiter	May 2, 2013			
80.	United States	Delta IV – Orion (EFT – 1)	Orbiter	Sept, 2014			
81.	United States	SLS-Orion (EM-1)	Orbiter	2017			
82.	United States	Constellation Altair Lander (cancelled)	Lander	2018			
83.	Japan (JAXA)	SELENE-2 (cancelled)	Orbiter and Lander with Rover	2018			
84.	China (CNSA)	Chang'e 4	Lander				
85.	India (ISRO)	Chandrayaan - 2	Orbiter and Lander	2019			
86.	China (CNSA)	Chang'e 5	Lander	2019			
87.	Russia (Roscosmos)	Luna 25	Lander	2020			
88.	United States	Artemis I	Orbiter	2020			
89.	Japan (JAXA)	SELENE-3	Orbiter and Lander with Rover plus sample return ascent vehicle	2021			
90.	Russia (Roscosmos)	Luna 26	Orbiter	2021			
91.	Russia (Roscosmos)	Luna 27	Lander	2022			
92.	United States	Artemis II	Orbiter	2022			
93.	United States	Artemis III	Lander	2024			
94.	Russia (Roscosmos)	Luna 28	Lander	2026			
95.	Russia (Roscosmos)	Luna 29	Lander	2028			